FINAL REPORT

CITY OF NORTH MYRTLE BEACH SOUTH CAROLINA BEACHFRONT MANAGEMENT PLAN

Submitted to:

South Carolina Coastal Council 4130 Faber Place, Suite 300 Charleston SC 29405

By:

City of North Myrtle Beach 1015 Second Avenue South North Myrtle Beach SC 29582

JUNE 1992

RESOLUTION For The Adoption Of The

COMPREHENSIVE BEACH MANAGEMENT PLAN City of North Myrtle Beach, South Carolina

- whereas, the South Carolina Beachfront Management Act of 1988, as amended in 1990, was enacted for the purposes of protecting, preserving, and enhancing the beach/dune system of the Atlantic Ocean coastline in South Carolina; and
- whereas, the Beachfront Management Act requires the creation of a long-range and comprehensive beach management plan for the preservation of the State's coastline; and
- whereas, Section 48-39-350 of the Beachfront Management Act encourages local governments to prepare and submit local comprehensive beach management plans as local components of the long-range plan for the State; and
- whereas, Section 48-39-350 also requires local governments to establish and enforce local comprehensive beach management plans as a prerequisite to eligibility for the receipt of state-generated funding for beach preservation, conservation, and nourishment; and
- whereas, Section 48-39-350 also requires the submission of local comprehensive beach management plans by July 1, 1991, for review and approval by the South Carolina Coastal Council; and
- whereas, the City Council of the City of North Myrtle Beach shares the State's concern for the protection and preservation of its beaches and environs; and
- whereas, the City Council of the City of North Myrtle Beach has authorized the completion of a local comprehensive beach management plan for the City of North Myrtle Beach; and
- whereas, said plan has been completed in compliance with the requirements of the South Carolina Beach Management Act and guidelines promulgated by the South Carolina Coastal Council and is attached herewith; and
- whereas, said plan was submitted to the North Myrtle Beach Planning Commission for review and recommendation on April 22, 1991; and
- whereas, the North Myrtle Beach Planning Commission recommended on May 13, 1991, that City Council adopt said plan, giving careful consideration to the definition of essential vehicular beach traffic.

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and City Council, in Council duly assembled, that the attached local comprehensive beach management plan be adopted.

BE IT FURTHER RESOLVED, that said attached plan be submitted to the South Carolina Coastal Council for review and approval as compliant with the South Carolina Beach Management Act and guidelines promulgated by the South Carolina Coastal Council.

DONE, RATIFIED AND PASSED, THIS 20th DAY OF MAY, 1991.

Mayor Phil Tilghma

ATTEST:

Burely K. Hanz

CITY OF NORTH MYRTLE BEACH COMPREHENSIVE BEACHFRONT MANAGEMENT PLAN

	TABLE OF CONTENTS	Page
I.	INTRODUCTION	1
	Purpose	ī
	Background	1
	Scope	_
	Authority	2
	SCCC Approval	2
11.	AREA PHYSICAL DESCRIPTION	3
Ш.	HISTORICAL EROSION RATES	6
••••	Baselines and Setback Lines.	7
	Hurricane Hugo.	8
	<u> </u>	10
	Summary	10
IV.	BEACH INVENTORY	23
	General Information	23
	Discussion of Orthogonals and Overlays	23
	Structural Inventory	26
	Introduction	26
	Analysis of Inventory	26
	Recommended Ordinances	27
	Summary	27
	Land Use and Zoning	28
	Introduction	28
	Zoning Classifications	28
	Analysis	30
	Recommended Ordinances	31
	Beach Access and Parking.	33
	Introduction	33
	Inventory of Beach Access and Parking	33
	Analysis and Plan	34
	Recommended Ordinances	36
	Summary	37
	Drainage Inventory	38
`		38
	Introduction	
	Analysis of Inventory	38 42
	Drainage Plan Development	43
	Summary	43
	Endangered Species	45
	Introduction	45
	Protection Plan	45
	Beach Erosion Control Plan Alternatives and Analysis	46
	Seawalls, Bulkheads, and Revetments	46
	Groins	46
	Sand Scraping	46
	Beach Nourishment	47
	Dune Enhancement and Revegetation	47
	Building Relocation	48

CITY OF NORTH MYRTLE BEACH COMPREHENSIVE BEACHFRONT MANAGEMENT PLAN

	TABLE OF CONTENTS (continued)	Page
V. 40-YEAR	RETREAT STRATEGY	50
introduct	ion	50
Summary	/	51
VI. POSTDISA	ASTER PLAN	
Introduct	ion	52
Hurrican	e Emergency Operations Plan	53
Summary	y	53
Appendix A.	Tabular Summary of Structures Tabular Summary of Beach Access and Parking	,
Appendix D.	Tabalai Sammary of December 1	
Exhibit A.	Beach Management Act 1990	
Exhibit B.	Comparative Profiles (March 1989 to October 1990)	
Exhibit C.	SCCC Guidelines for Complying	
Exhibit D.	Building Ordinance (Sections 6-146 through 6-153)	
Exhibit E.	Zoning Ordinance for W1 and CPO	
Exhibit F.	SCCC Zoning Letter	
Exhibit G.	Guidelines for Beach Access Programs	
Exhibit H.	Summary of Costs of Street-End Improvements	
Exhibit 1.	Guidelines for Regulation of Vehicular Traffic	
Exhibit J.	Pier Ordinance	
Exhibit K.	Stormwater Management Ordinance	
Exhibit L.		
Exhibit M.	Guidelines for Protection of Endangered Species	
Evhihit M	Model Reach Lighting Ordinance	

PREFACE PLAN ADOPTION LETTER AND RESOLUT	<i>ION</i>
Table of Contents ACKNOWLEDGMENTS	1
I. INTRODUCTION	2
II. AREA PHYSICAL DESCRIPTION	3
III. HISTORICAL EROSION RATES	4
IV. BEACH INVENTORY	5
V. 40-YEAR RETREAT STRATEGY	6
	n. 1-11
VI. POSTDISASTER PLAN	7
Appendix A. Appendix B.	8
Exhibit A — Exhibit P	9
Overlays	10

Briggs.

PREFACE

The City of North Myrtle Beach has prepared this beachfront management plan in accordance with the requirements of the South Carolina Code of Laws, Section 48-39-350, Beach Management Act, as amended 1 July 1990. The document provides a detailed inventory of existing conditions along the approximate nine-mile oceanfront between Hog Inlet and White Point Swash, encompassing the limits of the City of North Myrtle Beach. The inventories include lists of buildings, shore-protection structures, and miscellaneous amenities such as pools, lists of beach accesses and parking areas, outlines of drainage basins and stormwater-control improvements, summaries of land use and zoning, and an endangered species list. Also included is a review of beach erosion rates and a general plan for beach erosion control, a postdisaster plan, and the city's 40-year retreat strategy. Accompanying the text are exhibits relating to the above elements of the plan. A separate set of map overlays supports the plan providing delineations of structures, accesses, etc., at 1 inch equals 100 feet scale, corresponding with the 1988 SCCC orthophoto maps of the shoreline.

Questions regarding the plan should be addressed to the Planning Director, City of North Myrtle Beach, 1015 Second Avenue South, North Myrtle Beach, South Carolina 29582. Comments from the community are welcome.

Respectfully submitted,

A. William Moss, City Manager
June 1992



June 4, 1991

Wayne Beam, Ph.D. Executive Director South Carolina Coastal Council 4130 Faber Place, Suite 300 Charleston, South Carolina 29405

Dear Wayne:

It is with pleasure that I submit to the South Carolina Coastal Council a Comprehensive Beach Management Plan for the City of North Myrtle Beach, South Carolina. The plan is submitted for review and approval by the South Carolina Coastal Council as required by Section 48-39-350 of the South Carolina Beachfront Management Act.

We feel that the plan has been completed in compliance with the State Act and the guidelines of the SCCC. Please note that the plan was reviewed by the North Myrtle Beach Planning Commission and recommended for adoption. Our City Council formally adopted the plan by Resolution on May 20, 1991.

Should the SCCC have any questions, please feel free to contact our staff.

Sincerely,

Phil Tilghman

Mayor

PT:dmm/cmt

Enclosure: Plan only, mylars shipped under separate cover

R E S O L U T I O N For The Adoption Of The

COMPREHENSIVE BEACH MANAGEMENT PLAN City of North Myrtle Beach, South Carolina

- whereas, the South Carolina Beachfront Management Act of 1988, as amended in 1990, was enacted for the purposes of protecting, preserving, and enhancing the beach/dune system of the Atlantic Ocean coastline in South Carolina; and
- whereas, the Beachfront Management Act requires the creation of a long-range and comprehensive beach management plan for the preservation of the State's coastline; and
- WHEREAS, Section 48-39-350 of the Beachfront Management Act encourages local governments to prepare and submit local comprehensive beach management plans as local components of the long-range plan for the State; and
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Mayor Phil Tilghman

ATTEST:

Burely K. Franz City Clerk

TABLE OF CONTENTS

		PAGE
	PREFACE PLAN ADOPTION LETTER AND RESOLUTION Table of Contents ACKNOWLEDGMENTS	
I.	INTRODUCTION Purpose Background Scope Authority SCCC Conditional Approval SCCC Final Approval	1 1 2 2
II.	AREA PHYSICAL DESCRIPTION	3
ш.	HISTORICAL EROSION RATES	7 8
IV.	BEACH INVENTORY General Information Orthogonals and Overlays Structural Inventory Introduction Analysis of Inventory Recommended Ordinances Summary Land Use and Zoning Introduction Zoning Classifications Analysis Recommended Ordinances Beach Access and Parking Introduction Inventory of Beach Access and Parking Analysis and Plan Recommended Ordinances Summary Drainage Inventory	23 23 26 26 26 27 28 29 29 31 32 35 35 35 36 37 38 40
	Drainage Inventory	40 41 44 45
	Summary	45

TABLE OF CONTENTS (continued)

		PAGE
Endangere	d Species	47
	luction	47
	ction Plan	47
	sion Control Plan Alternatives & Analysis	48
	alls, Bulkheads, and Revetments	48
	S	48
	Scraping	48
	Nourishment	49
	Enhancement and Revegetation	49
	ing Relocation	50
	e Plan	50
V. 40-YEAR RET	REAT STRATEGY	52
	on	52
		53
•	ER PLAN	54
	on	54
	ricane Emergency Operations Plan	
		56
Bullinary		
Appendix A.	Tabular Summary of Structures	
Appendix B.	Tabular Summary of Beach Access and Parking	
Exhibit A.	Beach Management Act 1990	
Exhibit B.	Comparative Profiles (March 1989 to October 1990)	
Exhibit C.	SCCC Guidelines for Compliance with Beach Management	Act
Exhibit D.	Building Ordinance (Sections 6-146 through 6-153)	
Exhibit E.	Zoning Ordinance for W1 and CPO	
Exhibit F.	SCCC Zoning Letter	
Exhibit G.	Guidelines for Beach Access Programs	
Exhibit H.	Costs Summary of Street-End Improvements	
Exhibit I.	Parking and Access Signage	
Exhibit J.	Guidelines for Regulation of Vehicular Traffic	
Exhibit K.	Pier Ordinance	
Exhibit L.	Stormwater Management Ordinance	
Exhibit M.	Letter with Sketch from South Carolina Heritage Trust	
Exhibit N.	Comprehensive Plan (Objectives 1 & 2)	
Exhibit O.	Guidelines for Protection of Endangered Species	
Exhibit P.	Model Beach Lighting Ordinance	

ACKNOWLEDGMENTS

The City of North Myrtle Beach prepared this plan in close coordination with the South Carolina Coastal Council and with technical assistance from Coastal Science & Engineering, Inc. We thank the outgoing and present chairman of the SCCC, Senator John Hayes, and Mr. Wes Jones as well as the council members for overall guidance. We acknowledge the assistance of the SCCC staff including executive director, Dr. H. Wayne Beam; planning director, Stephen Snyder; and project manager, Rob Mikell.

Preparation of the plan was supervised by city staff, Douglas Maddock, planning director, with assistance by Teresa Pierce, planner, and Jerry Pierce, city engineer. Technical assistance by Coastal Science & Engineering, Inc., was provided by Timothy W. Kana, P.G., Alexis Keels, P.E., Chris Andrassy, P.E., and Diana Sangster.

I. INTRODUCTION

PURPOSE

The City of North Myrtle Beach submits this document to comply with the South Carolina Code of Laws, Section 48-39-350, of the South Carolina Coastal Zone Management Act, as amended 1 July 1990.

BACKGROUND

The South Carolina Coastal Council (SCCC) is a coastal zone management and permitting agency which was established in 1977 by passage of the Coastal Zone Management Act for the State of South Carolina. The SCCC is mandated to protect the quality of South Carolina's coastal environment and to promote the economic and social improvement of the coastal zone and of the people of the state. Effective 1 July 1988, the South Carolina Code of Laws was amended to increase beach management authority in the state's coastal zone. The 1988 legislation was amended during the 1990 legislative session and made into law on 1 July 1990 (Exhibit A). This legislation will be referred to in this plan as the Beach Management Act. Among other requirements, the provisions require each coastal beachfront county and city to prepare a Local Comprehensive Beachfront Management Plan based on the SCCC's guidelines and to submit the plan for the SCCC's approval by 1 July 1991.

SCOPE

Section 48-39-350 requires the following information be contained in the local comprehensive beachfront management plans:

- 1) Inventory of beach profile data and historic erosion rate data for each standard and inlet erosion zone.
- 2) Inventory of public beach access and attendant parking and a plan to enhance public access and parking.
- 3) Inventory of all structures seaward of setback line.
- 4) Inventory of turtle nesting and important habitats of the beach dune system with protection plan.
- 5) Conventional zoning and land-use plan.

- 6) Analysis of beach-erosion control alternatives, including renourishment.
- 7) Drainage plan for area seaward of the setback zone.
- 8) Postdisaster plan.
- 9) Forty-year retreat strategy for achieving goals of the Beach Management Act.

AUTHORITY

This beach management plan for the City of North Myrtle Beach was adopted on May 20, 1991, by the city council.

SCCC CONDITIONAL APPROVAL July 19, 1991

SCCC FINAL APPROVAL

II. AREA PHYSICAL DESCRIPTION

The City of North Myrtle Beach occupies a nine-square-mile area along the Atlantic Coast in the northeastern corner of the State of South Carolina (Fig. II-1). With approximately nine miles of ocean frontage as its eastern boundary, the city is bounded loosely on the west by the Intracoastal Waterway, on the north from the mouth of Hog Inlet west to the waterway, and on the south by a line approximately 900 feet (ft) south of and parallel to 48th Avenue South. The city was incorporated in May 1968 to include the four municipalities of Windy Hill, Crescent Beach, Ocean Drive, and Cherry Grove.

The shoreline of North Myrtle Beach is included in the "Grand Strand" of South Carolina, a 30-mile stretch of shorefront between Little River Inlet to the north and Murrells Inlet to the south. The Grand Strand is a primary income generator for South Carolina's tourism industry. The City of North Myrtle Beach absorbs approximately 100,000 per day during peak tourist season. Like other communities within the Grand Strand, North Myrtle Beach has experienced rapid growth, with its permanent residential population more than doubling between 1980 and 1990, according to census figures.

Development consists of a combination of single-family houses, condominiums, apartments, small motels, and large high-rise hotels along with their supporting commercial establishments. Few vacant lots remain along the shorefront and redevelopment has increased the density of dwelling units and hotels along the beach. With limited land between Ocean Boulevard and the beach plus increased demand for beachfront living, high-density development moved closer to the shoreline, displacing much of the natural dune system.

Although changes along the North Myrtle Beach shoreline have been gradual in comparison to many coastal areas in South Carolina, periods of erosion combined with the seaward shift in development forced construction of various shore-protection measures. As much as 25 percent of the oceanfront is now armored with seawalls, bulkheads, or rock revetments to protect development from high tides and erosion. As more hard structures for erosion control were built, the available high-tide beach diminished in some sections. Parts of Cherry Grove, for example, have virtually no "dry-sand" beach during high tide. Where dunes were previously displaced by buildings and seawalls, the natural dynamics of the beach have been adversely affected. Vertical

structures and, to a lesser extent, sloping rock revetments have tended to accelerate erosion of the high-tide beach and have slowed its natural recovery after storms. The consequences of these beach trends, at a minimum, have been increased inconvenience for recreational use and, at a maximum, have caused severe reduction in the amount of usable beach.

Recognizing the potential cost to the community in continuing these trends, the City of North Myrtle Beach requested assistance from the SCCC in formulating a shore-front management plan for protection of existing property, preservation of the recreational beach, and redevelopment of the shoreline. The Local Comprehensive Beachfront Management Plan incorporates many of the findings from the North Myrtle Beach Shore-front Management Plan of 1986 with additional survey data and the 1989 SCCC guidelines for the development of such plans.

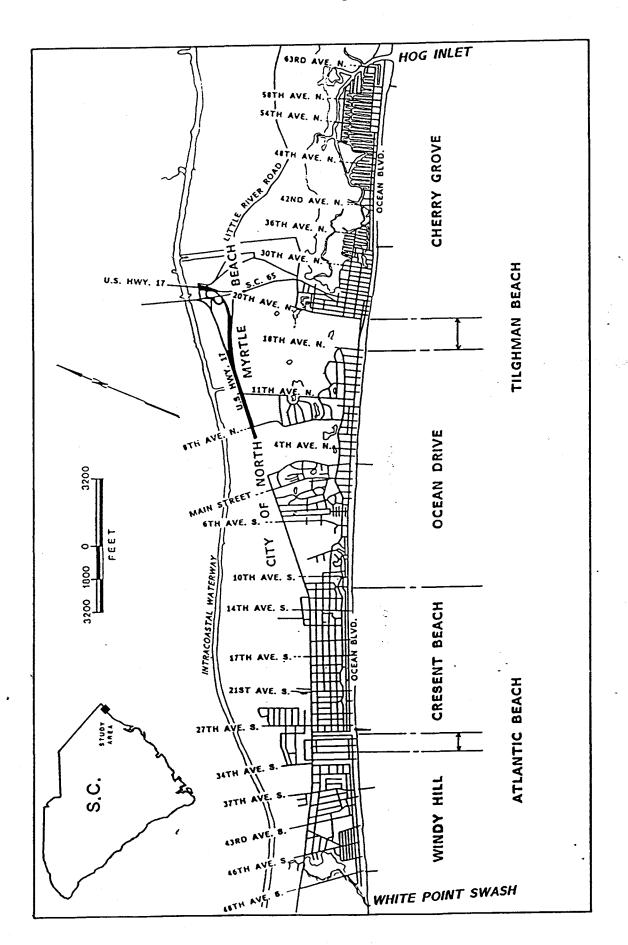


FIGURE II-1. Location map of the City of North Myrtle Beach.

III. HISTORICAL EROSION RATES

Long-term shoreline changes at North Myrtle Beach have been gradual in comparison to many coastal areas in South Carolina. With only a small inlet to the northeast (Hog Inlet) and a swash south of Windy Hill, the shoreline forms a broad arc (part of the Grand Strand) which is in equilibrium with the principal wave approaches. A 1977 Sea Grant erosion inventory classified North Myrtle Beach as generally stable. A later study, North Myrtle Beach Shorefront Management Plan (SMP), for the city in 1986 provided detailed accounting of linear shore movement and volumetric sand losses since the 1950's. The SMP estimated long-term erosion rates at a low 0.4 foot per year (ft/yr) (recent 40-year trend) and volumetric losses along the recreational profile at around 0.2 cubic yards per foot per year (cy/ft/yr) (1955-1985).

Despite these favorable trends, periods of erosion combined with a seaward shift in development have forced construction of various shore-protection measures including vertical seawalls and bulkheads, and sloping rock revetments. Development has also displaced natural dunes, reducing protection to properties located close to the shoreline.

The U.S. Army Corps of Engineers (USACE) prepared two studies in 1962 and 1983 which further support the observed trend. The USACE classified 79 percent of the shoreline as "stable" and 21 percent as eroding. The worst areas were identified as the section of Cherry Grove (between 37th and 20th Avenues North) and Crescent Beach (between 14th and 21st Avenues South). Shoreline change rates ranged from 0.6 ft/yr to 1.5 ft/yr based on maps for 1873 to 1942, a period prior to extensive development. The USACE estimated volumetric losses at 0.6 cy/ft/yr to 2.6 cy/ft/yr by extrapolating from linear rates.

The 1986 SMP documented short-term erosion rates from profiles, greatly exceeding the long-term erosion rates. Between September 1983 and July 1985 (1.8 years), the recreational beach zone from the foredune/seawall to -5 ft NGVD (low-tide wading depth) lost over 320,000 cy along 43,800 ft of shoreline (-4.1 cy/ft/yr). In contrast, only 262,000 cy were estimated lost for the period September 1955 to July 1985 (29.8 years). This later estimate, based on profiles, equated to -0.2 cy/ft/yr. Figures III-1 and III-2, reproduced from the SMP, show the distribution of losses along the nine shoreline compartments delineated in that study. In simple terms, accretion was more common in the

north and south while erosion dominated over the central area. It can be seen, however, the long-term and short-term trends were variable.

One year after completion of the SMP, two northeasters occurred (2 December 1986 and 1 January 1987). The latter storm produced about 40 ft of dune retreat throughout the Grand Strand and caused over \$2.5 million in property damage at North Myrtle Beach (Horry County Civil Defense Agency). Much of the damage involved seawalls and pools which collapsed from undermining and scour as storm waves penetrated further inland. Remedial action along the beach after the storms was largely confined to beach scraping and rebuilding seawalls.

An analysis for the SCCC's first beach monitoring surveys (CSE, 1988) estimated erosion losses from the winter 1987 storms at -11.2 cy/ft in North Myrtle Beach. By April 1987, 7.0 cy/ft had been recovered, for a short-term loss averaging -4.2 cy/ft. The report stated the Cherry Grove area continues to be critically short of sand . . . and the sections of North Myrtle Beach with armored shorelines continue to have a lower sand volume than natural sections as seawalls exacerbate the erosion problem.

Following the first state surveys of erosion in 1986 and 1987, a new system of monuments was established in North Myrtle Beach (5700-5800 series) (Table III-1). At present, these total approximately 40 and are positioned in the NAD'83 coordinate system. Because the monuments are in new locations, direct comparison with earlier surveys is not possible. Based on pre-*Hugo* erosion data, the SCCC reports an official interim erosion rate of -0.4 ft/yr at each station (Exhibit B-1).

BASELINES AND SETBACK LINES

The Beach Management Act (BMA) of 1990 prescribes methodology for establishing baselines and setback lines for the purposes of enforcing state law. Interim lines were set in July 1988 based on the 1986 SMP. These lines were adopted by the city for purposes of implementing local oceanfront development regulations. In 1991, the SCCC modified the 1986 baseline for some properties. The SCCC baseline for North Myrtle Beach was adopted in June 1991 and varies somewhat from the city's building control line, which is based upon the 1986 data. The analysis for the proposed SCCC lines is given in Exhibit B-1. As part of the present plan, CSE analyzed October 1990 beach

data and, applying the methodology prescribed by the BMA, computed revised baseline positions (offsets) for each SCCC monument. A comparison of all lines is given in Table III-2.

In general, differences between the lines are small, indicating relatively little change in beach condition between 1986 and October 1990. While the city ordinance is tied to the original (1986) lines, it is expected the lines will be revised from time to time as conditions change along the beach. Surveys from October 1990 support seaward movement of the SCCC lines. However, because little time has passed since *Hugo* and nourishment, it is considered premature to use these data. As mentioned in the zoning and land-use section, the ordinance and its building control lines will be reevaluated before February 1994, and the adoption of the state's then-existing setback lines may be considered as well as other available scientific data.

HURRICANE HUGO

The most recent climatic event of concern is Hurricane *Hugo* (21 September 1989) and the emergency response. *Hugo* caused unprecedented damage and extensive beach erosion north of Charleston with upwards of 75 ft of erosion at North Myrtle Beach (Fig. III-3). Volumetric losses exceeded 1.1 million cubic yards (26 cy/ft) along the recreational beach (to -5 ft NGVD) (Fig. III-4).

Soon after the storm, FEMA (the Federal Emergency Management Agency) designated 7,200 ft of shoreline for emergency protection. FEMA approved construction of dunes at an elevation of +9 ft NGVD, a height corresponding to the five-year returnperiod water level. The state approved a similar emergency measure for remaining sections of the city. The purpose of the emergency dune was to protect remaining structures from further damage, given the highly eroded condition of the beach. Construction was by means of bulldozers and pan earthmovers using sand from the intertidal beach. The emergency dunes were completed by mid October 1989 (Kana et al., 1991). By December 1989, about 225,000 cy of sand had returned to the beach through profile recovery, a natural process whereby sand deposited offshore during storms gradually migrates back to the beach. However, the extent of the sand loss and deficit condition

of certain areas of the beach before *Hugo* suggested large-scale remedial measures would be needed to build a viable beach before the next tourist season.

Subsequent to the emergency dune building, the state and federal governments approved a plan for emergency nourishment in the most critically eroded sections. The plan was implemented between December 1989 and March 1990 and involved placement of 372,260 cy of sand along 30,000 ft of North Myrtle Beach. The borrow source was accreted shoals in Hog Inlet north of the development. The combination of nourishment and natural recovery replaced almost 90 percent of the sand lost during *Hugo*. Post-project surveys indicated North Myrtle Beach regained by October 1990 all but 124,000 cy of sand lost during *Hugo* (Figs. III-5 to III-7; Table III-3). Emergency nourishment contributed about 40 percent and natural recovery produced the remainder. The short-term volumetric losses for the period March 1989 to October 1990 averaged less than 2.0 cy/ft/yr. If the emergency nourishment project had not been completed, the losses would have averaged around 7.8 cy/ft/yr. Rapid recovery has been beneficial for the community and tourism. Still, a large sand deficit remains, especially along Cherry Grove.

As in the past, certain sections of North Myrtle Beach tend to experience more erosion than others as shoreline dynamics change over the short term. The net long-term effect of *Hugo* and the winter 1987 storms on North Myrtle Beach's sand budget will not be known for a number of years until additional surveys become available. However, the condition of the beach at present can be documented by means of sand volumes and comparisons between monitoring stations and the estimated ideal profile volume for the city. Table III-3 presents the beach profile conditions from the most recent survey (October 1990), indicating unit volumes from the foredune/seawall to low-tide wading depth in comparison with an ideal volume of 96 cy/ft (SCCC). Exhibit B-2 contains a set of comparative profiles for the period March 1988 to October 1990. Irrespective of erosion rates, these data show a remaining deficit of sand along North Myrtle Beach. For the beach to remain viable for recreation, this deficit must be replaced and adequate sand added to account for long-term erosion losses.

SUMMARY

The condition of the beach along North Myrtle Beach in 1991 is similar to pre-Hugo conditions. Because of natural recovery combined with emergency nourishment, about 90 percent of the volumetric losses sustained during the hurricane have been restored. This supports the estimate of low erosion rates over the long term. Despite good overall recovery, problems remain. The Cherry Grove area still has a deficit and lacks a dry-sand beach although it is in somewhat better condition than pre-Hugo because of nourishment. The Hog Inlet area continues to have localized zones of erosion and accretion in connection with changes in offshore and accreted shoals. The Windy Hill resort district near Singleton Swash has also lost a large volume since 1989 (see Table III-3).

While the beach overall has recovered well since *Hugo*, dunes remain in the incipient stage with little or no relief along the backshore. This is particularly noticeable along Ocean Drive and Crescent Beach where the healthiest dunes existed before *Hugo*. Limited recovery of dunes to date leaves the entire shoreline more exposed and much of North Myrtle Beach's oceanfront development at risk. Remedial and long-range measures to deal with beach erosion are outlined in Section IV under Beach Erosion Control Plan Alternatives.

¹The official erosion rate for North Myrtle Beach is 0.4 ft/yr (SCCC). This is based on long-term trends from the 1950's to the 1980's (CSE, 1986). Storms such as *Hugo* and the winter 1987 northeasters produce higher rates over the short term, but the net effect after beach recovery is much less. The Beach Management Act of 1990 prescribes setbacks based on long-term erosion rates. The SCCC will periodically review and update long-term rates at which time the net effect from *Hugo*, recent storms, and beach nourishment will be factored into the rate.

TABLE III-1. List of surveys available at North Myrtle Beach for the years 1988 to 1990 and used in the historical erosion analysis. December 1989 and April 1990 surveys completed by CSE; all other surveys completed by USC Coastal Carolina College. ["B" denotes replaced monuments. *Monument destroyed or survey error preventing comparison.]

Reach	Mar'88	Mar'89	Oct'89	Dec'89	Apr'90	Oct'90
Southern						5700
	5705	5705	5705	5705	5705	5705
	5715	5715	5715	5715	5715	5715
	5720	5720	5720	5720	5720	5720
		5725	5725	5725	5725	*
Phase II-B	5730	5730	5730	5730	5730	5730
		5735	5735	5735	5735	5735
	5740	5740	5740	5740	5740	5740
		5745	5745	5745	5745	5745
	5750	5750	5750	5750	5750	5750 ·
		5755	5755	5755	5755	5755
	5760	5760	5760	5760	5760	5760
	5770	5770	5770	5770	5770	5770
		5775	5775	5775	5775	5775
	5780	5780		5780	5780	5780
		5785	5785	5785	5785	5785
Central	5790	5790	5790	5790	5790	5790
	5795	5795	5795	5795	5795	5795
		5798	5798	5798	5798	5798
	5800	5800		5800	5800	5800
		5803	5803	5803	5803	5803
	5805	5805	5805	5805	5805	5805
	5815	5815	5815	5815	5815	*
	0010	5818	5818	5818	5818	5818
Phase I	5820	5820	5820	5820	5820	5820
		5825	5825	5825	5825	5825
	5830	5830		5830	5830	*
		5835	5835	5835	5835	*
	5840	5840	5840	5840	5840	5840
			00.0	00.0	5845	5845B
	5850	5850	5850	5850	5850	5850
•			0000	0000	5855	5855B
Phase II-A	5860	5860		5860	5860	5860B
		5865	5865	5865	5865	5865
	5870	5870	5870	5870	5870	5870
			5875	5875	5875	5875
Northern	5880	5880	5880	5880	5880	5880
		5885	5885	5885	5885	5885
	5890	5890	5890	5890	5890	5890
		5895	5895	5895	5895	5895
TOTALS	22	36	33	37	39	36

TABLE III-2. North Myrtle Beach nourishment baseline calculations. The ideal dune crest is computed at 18 ft landward of the point at which the ideal volume is computed. Ideal volume is constant at 96 cy/ft. City ordinance results and all asterisked (*) values were determined

the ideal vol	(+) Seaward.	(-) Landward.	the ideal volume is computed. Ideal volume is constant at 90 cy/it. graphically. (+) Seaward. (-) Landward. [Source: Coastal Science &	ш	City ordinance results and Engineering, Inc., May 1991]	May 199	0	all astefisked (*) Values were determined	re determined
		KEY: LH MF	= large hotel/resort/condominiums = multifamily/smail condominiums		SM = small hotel SF = single family	NS Vij	/ = seawall		
		၁၁၁Տ	City	Recomputed	Diffe	Difference	SCCC	Notes	es
Station	Locality	Baseline Fall'88 Survey	Ordinance 1986 Survey	Baseline Oct'90 Survey	1990 vs SCCC C	City	Versus	Building Type	1990 Dune Crest
5700	475	155*	144	159	+4*	+15	+11	H	@ 193 ft
5705	45S	181	179	173	ထု	φ	+5	Н	No
5715	398	148	164	153	+2	-11	-16	MF/SM	@ 182 ft
5720	338	166	189	176	+10	-13	-23	MF/SM	No
5730	275	262	238	238	-24	0	+24	Holiday Inn	No
5735	23S	212*	205	204	ထု	7	+1	Н	N
5740	20S	187	189	191	*	+5	-5	H	8
5745	185	195*	185	196	+1*	+11	+10	Н	N _o
5750	175	162	162	166	+4	+4	0	H	No
5755	158	178*	178	178	0	0	0	SM	No
2160	14S	146	175	158	+12	-17	-29	Н	N
5770	115	189	211	203	+14*	ထု	-22	SF	@ 220 ft
5775	108	201*	213	207	+9+	φ	-12	M	@ 221 ft
5780	88	163	178	176	+13	-5	-15	SF	@ 183 ft
5785	7\$	230*	244	248	+18	+4	-14	SM	S
5790	2 S	257	257	257	•	0	0	SM	N _o

TABLE III-2 (continued). North Myrtle Beach nourishment baseline calculations. The ideal dune crest is computed at 18 ft landward of the point at which the ideal volume is computed. Ideal volume is constant at 96 cy/ft. City ordinance results and all asterisked (*) values were determined graphically. (+) Seaward. (-) Landward. [Source: Coastal Science & Engineering, Inc., May 1991]

		KEY: LH MF	= large hotel/resort/condominiums = multfamily/small condominiums	condominiums condominiums	SM = small hotel SF = single family		SW = seawall ND = no data		
		ວວວຮ	(Recomputed	Differ	Difference	၁၁၁ಽ	N	Notes
Station	Locality	Baseline Fall'88	Ordinance 1086	Baseline Oct'00	1990 vs	8 	Versus	Building	1990
		Survey	Survey	Survey	၁၁၁Տ	City	City	Type	Dune
5795	28	222	232	228	9+	4	-10	H	@ 201 ft
2428	11N	256*	265	268	+12	+3	6-	H	@ 263 ft
2800	3N	321	321	307	-14	-14	0	ГН	@ 330 ft
5803	NS	298*	322	296	-2*	-26	-24	LH/SF	@ 280 ft
2802	NZ	273	320	286	+13	-34	-47	SF	@ 290 ft
5810	N6	261*	306	275	+14	-31	-47	SF	@ 252 ft
5815	11N	311	343	ON	ND	N	-32	SF	ND
5818	14N	271*	281	290	+19	+	-10	SF	@ 247 ft
5820	17N	311	315	324	+13	6	4-	SF	@ 325 ft
5825	19N	264*	273	285	+21	+12	6-	гн	S
5830	20N	159	179	QN	QN	N	-20	SM	QN
5835	SEA	\$2\$	101	ND	QN	QN	-46	SM	ND
5840	26N	20	85	85	+65	0	-65	MF	SW
5845	30N	+11	29	43	+32	-24	-56	MF	NS.
2850	32N	64	104	82	+18	-22	-40	T.	SW
5855	37N	28*	112	103	+45	6-	-54	SF	@ 108 ft
2860	42N	107	107	123	+16	+16	0	SF	@ 107 ft

TABLE III-2 (continued). North Myrtle Beach nourishment baseline calculations. The ideal dune crest is computed at 18 ft landward of the point at which the ideal volume is computed. Ideal volume is constant at 96 cy/ft. City ordinance results and all asterisked (*) values were determined graphically. (+) Seaward. (-) Landward. [Source: Coastal Science & Engineering, Inc., May 1991]

hotel/resort/condominiums $SM = small$ hotel $SW = seawall$ is a small $small$	Recomputed Difference	Baseline 1990 vs Versus Building	Survey SCCC City	24 141 +12 +17 +5 MF No	18 112 +5 -6 -11 MF @ 117 ft	02 94 -12 -8 +4 SF/MF No	48 164 +6 +16 +10 MF SW	05 173 -32 -32 0 MF @ 203 ft	24 151 -31 -73 -42 MF No	ID 141 -26 ND ND MF No	Averages +8.3 -7.3 -15.7
= small hotel = single family	Difference	1990 vs									
	Recomputed	Baseline Oct'90	Survey	141	112	94	164	173	151	141	Averages
= large hotel/resort/c = multifamily/smail c	City	Ordinance 1986	Survey	124	118	102	148	205	224	QN	
KEY: LH :	ວວວຣ	Baseline Fall'88	Survey	129*	107	106*	158	205*	182	167*	
		Locality		45N	48N	51N	54N	57N	N69	62N	
		Station		5865	5870	5875	5880	5885	2890	5895	

TABLE III-3. March 1989 to October 1990 beach volume changes along the recreational beach from the dune/seawall to low-tide wading depth (+9 ft to -5 ft NGVD). Beach volume calculations begin at the indicated distance seaward of SCCC monuments. Phases refer to principal nourishment areas after Hurricane *Hugo*. [Negative sign (-) denotes erosion. ND = no data.]

		Volume	+9	ft to -5 f	t Unit V	olume (c	v/ft)	+9 to	-5 Change
Station	Reach (ft)	Begins At (ft)		Mar'89			Oct'90	Unit Volume (cy/ft)	3'89-10'90 Volume (cy)
SOUTHE	RN								
5700	1,500	205	85.5	79.3	67.3	95.4	79.8	+0.5	750
5705	1,518	165	113.4	111.5	69.9	76.4	78.8	-32.7	-49,639
5715	1,687	182	88.6	85.5	79.5	81.4	90.1	4.6	7,760
5720	2,129	205	93.1	95.1	87.4	86.6	89.2	-5.9	-12,561
PHASE I									•
5730	1,828	260	119.0	112.1	90.8	97.7	93.9	-18.2	-33,270
5735	1,162	237	ND	83.7	62.9	77.2	86.0	2.3	2,673
5740	965	220	88.8	84.0	68.2	86.1	89.7	5.7	5,500
5745	945	239	ND	74.0	62.7	67.7	80.0	6.0	5,670
5750	1,129	212	77.4	76.8	62.0	72.3	79.0	2.2	2,484
5755	1,094	200	ND	93.1	77.6	86.9	93.8	0.7	766
5760	1,054	165	103.1	103.3	79.0	93.9	101.0	-2.3	-2,429
5770	860	217	100.4	101.4	78.9	95.3	98.0	-3.4	-2,924
5775	859	212	ND	106.6	86.4	102.2	102.2	-4.4	-3,780
5780	1,128	203	95.1	92.6	71.8	80.8		-1.4	-1,579
5785	1,085	267	ND	89.3	65.4	93.9	95.5	6.2	6,727
CENTRA		207	NU	03.3	05.4	33.3	33.3	0.2	0,727
5790	1,179	270	97.0	99.9	71.1	81.0	98.2	-1.7	-2,004
5795	1,173	231	103.4	107.7	85.5	95.3	103.3	-4.4	-2,00 4 -5,073
5798	963	286	ND	107.7	82.4	89.0	95.8	-4.4 -5.3	-5,073 -5,104
5800	816	350	110.6	111.8	70.6	80.6	80.4	-5.3 -31.4	-5,104 -25,622
5803	787	310	ND	105.0	83.2	93.9	97.7	-7.3	-5,745
5805	1,779	303	109.1	109.1	79.3	88.5	96.2	-12.9	-22,049
5818	1,814	295	ND	107.8	83.2	95.6	102.1	-5.7	-10,340
PHASE I		0.40	400.0						0.050
5820	1,104	342	103.3	98.2	75.1	92.3	95.8	-2.4	-2,650
5825	1,900	302	ND	86.6	63.6	85.3	96.5	9.9	18,810
5840	1,847	141	55.1	53.8	42.9	68.5	73.7	19.9	36,755
5845	749	125	ND	51.6	ND	ND	60.6	9.0	6,741
5850	886	167	52.8	52.5	52.2	63.8	59.2	6.7	5,936
5855	1,228	127	ND	82.5	ND	79.9	92.5	10.0	12,280
PHASE II									
5860	1,373	128	96.1	92.9	79.8	94.3	102.4	9.5	13,043
5865	1,237	155	ND	93.5	75.1	88.4	97.8	4.3	5,319
5870	902	126	94.3	100.7	86.6	91.4	97.8	-2.9	2,616
5875	891	121	92.1	ND	79.9	88.8	91.1	-2.9	2,584
NORTHE									
5880	1,049	189	89.7	84.5	74.3	89.8	91.5	+7.0	+7,343
5885	1,271	203	ND	105.8	81.5	87.9	90.1	-15.7	-19,955
5890	969	168	111.4	114.1	100.8	97.7	96.2	-17.9	-17.345
5895	1,016	134	ND	148.9	119.4	117.7	103.8	-45.1	-45,821
TOTAL									-124,1 <mark>33</mark> cy
	43,858						(Avera	ge) -2.8 cy	/ft

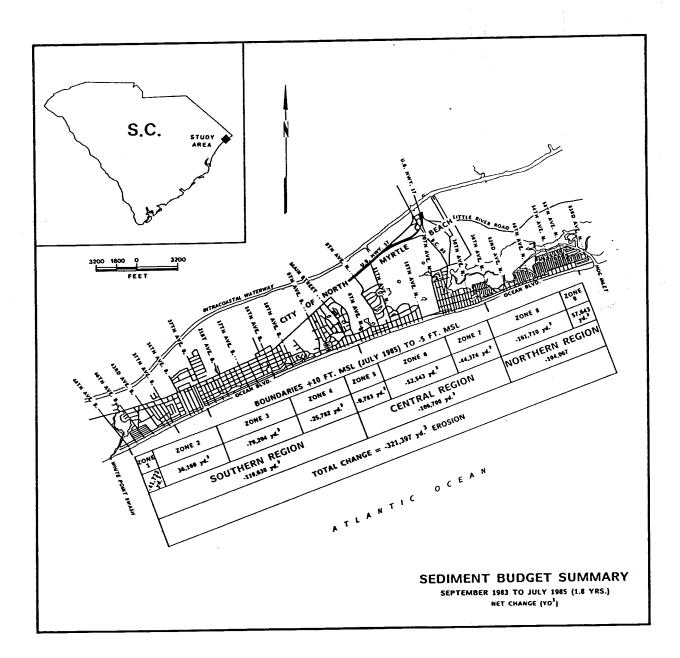


FIGURE III-1. Sediment-budget estimate by zone and region for one recent period, September 1983 to July 1985. Boundaries are +10 ft to -5 ft NGVD. These results are based on 16 comparative profiles available for the period. [Source: 1986 North Myrtle Beach Shorefront Management Plan]

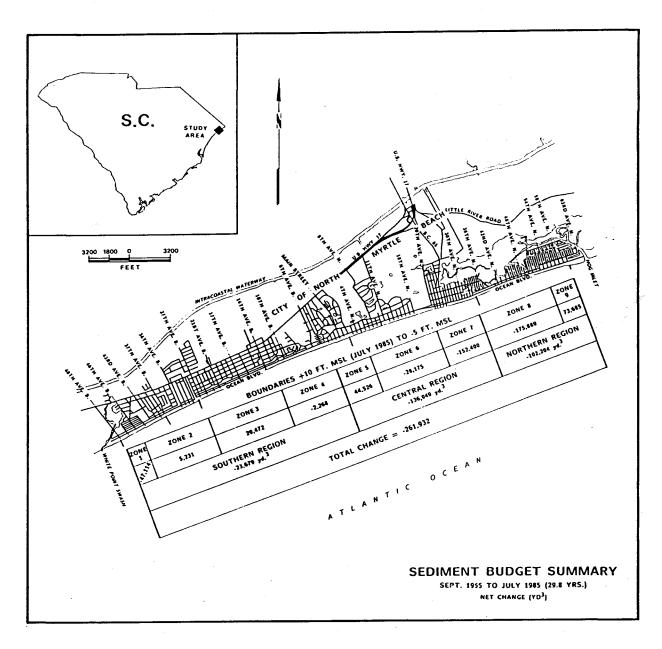


FIGURE III-2. Estimated, long-term sediment budget for North Myrtle Beach, applying an adjustment in seasonal trends as discussed in the 1986 North Myrtle Beach Shorefront Management Plan. This result is consistent with results for nearby Myrtle Beach during a comparable time period.

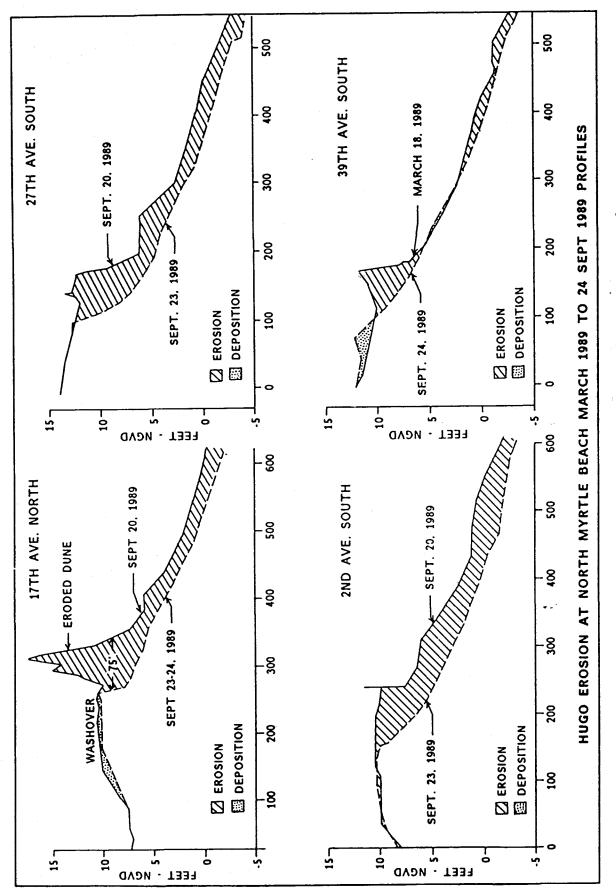


FIGURE III-3. Erosion caused by Hurricane Hugo, North Myrtle Beach, South Carolina. [Source: Nelson, 1989]

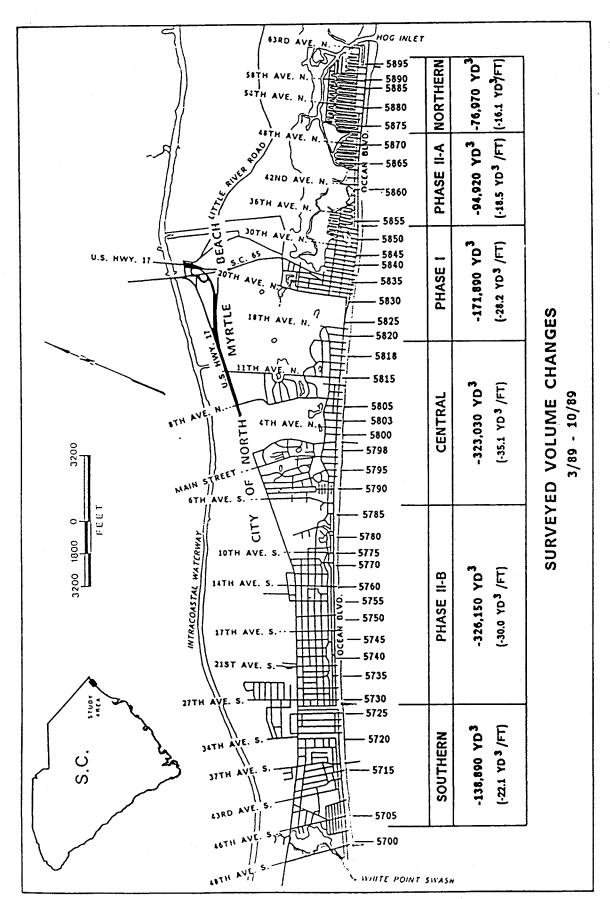
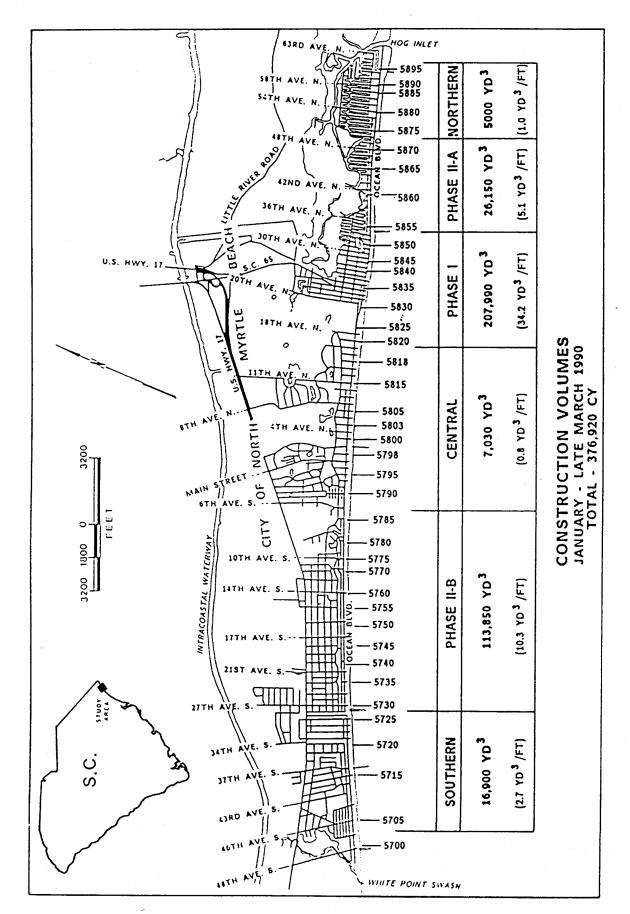
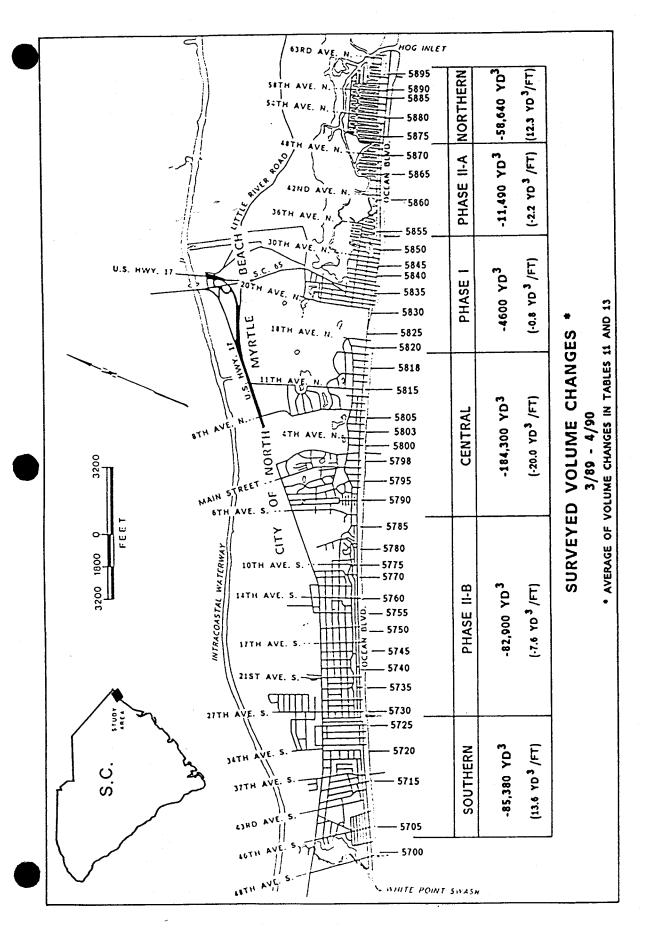


FIGURE III-4. Changes in sand volume by reach along North Myrtle Beach for the period March to October 1989, encompassing Hurricane Hugo. Survey limits are +10.0 ft to -5.0 ft NGVD, coinciding with the primary recreational zone of the beach. Losses totaled 1,131,850 cy or about 26 cy/ft. Phases refer to reaches nourished with emergency fill between December 1989 and February 1990. [Source: CSE, 1990]



North Myrtle Beach emergency nourishment volumes. [Source: CSE, 1990] FIGURE 111-5.



gain of over 700,000 cy compared with conditions immediately after Hugo. However, a deficit of over 425,000 cy remained in April 1990 compared with March 1989 conditions. Continued natural recovery during the summer of 1990 reduced the deficit to approximately 124,000 cy (approx. 2.9 FIGURE III-6. Changes in sand volume by reach along North Myrtle Beach for the period March 1989 (pre-Hugo) to April 1990 (postnourishment). Survey limits are +10.0 ft to -5.0 ft NGVD, coinciding with the primary recreational zone of the beach. The results show a net cy/ft, see Fig. III-7). [Source: CSE, 1990]

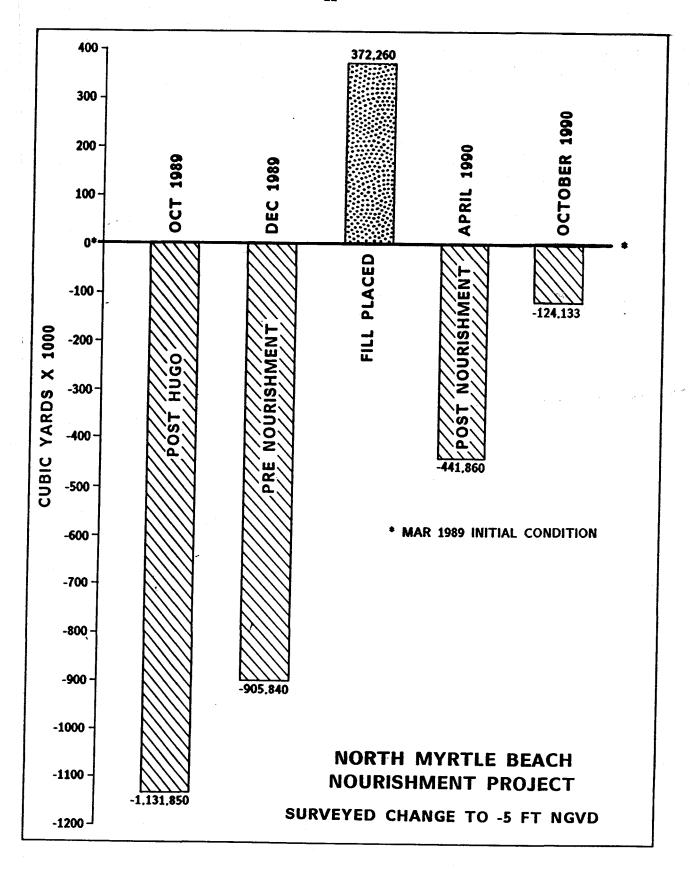


FIGURE III-7. Sand volume changes following Hurricane *Hugo* and emergency nourishment compared to the March 1989 beach condition along North Myrtle Beach [from Kana et al., 1991].

IV. BEACH INVENTORY

GENERAL INFORMATION

The following inventories of structures, parking facilities, drainage systems, etc., are an integral part of the Local Comprehensive Beachfront Management Plans. An inventory provides the city and state with necessary information about existing conditions along the coast. For example, such inventories provide proof of beach accessibility to the public for purposes of distributing state beach funds equitably, as well as providing a snapshot record of structures to be used in future permitting decisions.

Orthogonals and Overlays

The SCCC provided orthophoto maps, based on 2 July 1988 photography with a scale of 1 inch equals 100 feet, depicting the State Plane Coordinate System and the SCCC setback line and baseline. Figure IV-1 shows the location of each map overlay. Overlays of various inventories were produced on mylar for ease in viewing inventory information in relation to the information on the orthophoto maps. The overlays were created using AutoCad™ (Release 11). Each orthophoto map has one AutoCad™ file containing all overlays. Each file has layers as follows:

Layer	Color	Information
0	White	Setback lines
Drainage	Cyan	 Drainage system (pipes, basins, outfalls)
Parking	Green	 Public parking lots, public/private access points
Structural	Yellow	All structures
Zoning Access	Magenta Blue	Zone boundaries and usage (SCCC coordinates used)Lengths of fully accessible beaches

The overlays were created by a combination of digitization and drawing from fieldwork posted on copies of the orthophoto maps and are not to scale (i.e., the thickness of a line depicting a pipe is not representative of the diameter of the pipe; the width of a block depicting a public access point is not representative of the actual surveyed width of the easement, etc.). The coordinate system used is the NAD'83 State Plane Coordinate System. The actual state plane coordinates used are shown on the zoning layer. The drawings were then rotated for plotting purposes. The degree of rotation is shown on the zoning/drainage overlays.

There are three sets of mylars, reproduced from plots of the overlays, which contain the following:

Set	Layers
412S-432S	Structural
412D-432D	Drainage, zoning, endangered species*
412P-432P	Parking, access

[*Included on zoning layer]

Note that layer 0 is not included on the mylars to allow for changing baselines and setback lines. The access layer was created as a tool for analyzing public accessibility of various stretches of beach.

Attached as Exhibit C are SCCC guidelines for complying with the beach inventory portion of the Local Comprehensive Beachfront Management Plan. The information required in these instructions, including legends, is repeated on the tabular inventories at the end of each inventory, as well as on each overlay.

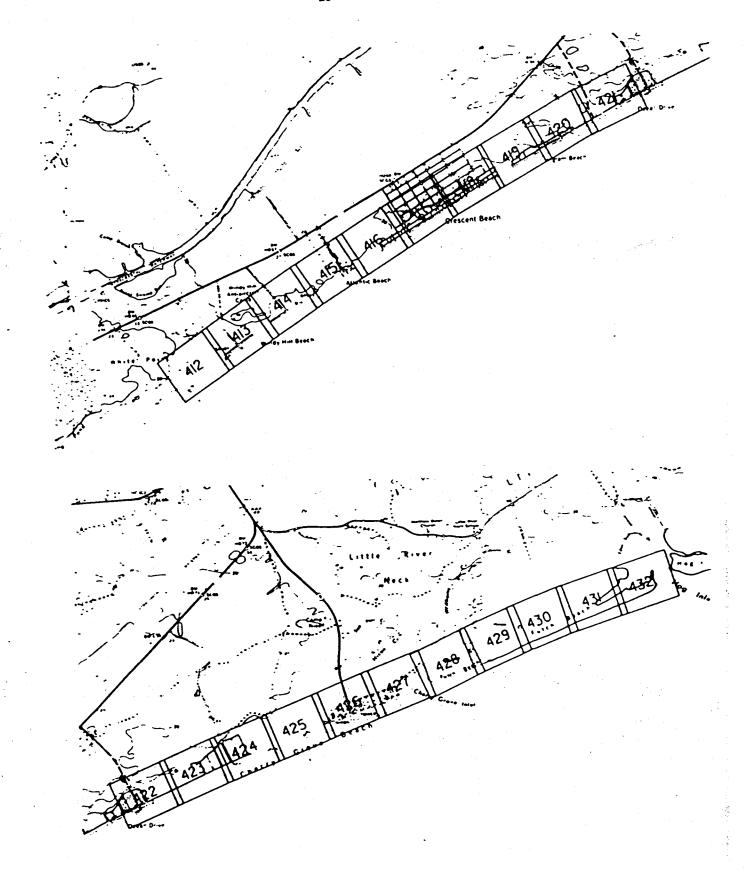


FIGURE IV-1. Location of map overlays.

STRUCTURAL INVENTORY

Introduction

In the early 1950's, most coastal development in North Myrtle Beach consisted of small communities of beachfront cottages with a few hotels. Cottages were set toward the back of each lot close to Ocean Boulevard. The beach/dune system was generally unaffected by development and in 1954 when Hurricane *Hazel* destroyed many of the cottages, the beachfront lots themselves recovered. In the 1960's and 1970's, many cottages were replaced by hotels, motels, and parking which crowded the lots, reducing setback from the dune system. In the aftermath of Hurricane *David* in 1979, which washed away up to 20 ft of the foredunes, property owners accelerated the building of hard erosion-control devices such as seawalls and revetments. In the 1980's, rising demand for beachfront property increased development of larger hotels, high-rise resorts and condominiums, parking garages, and pools, most of which were built behind seawalls and further reduced dune setbacks.

Until 1988, there were few setback restrictions to oceanfront development. The 1988 Beach Management Act and the 1990 Amended Beach Management Act gave the SCCC additional jurisdiction over the beach/dune system. The act provided for the SCCC establishing a baseline to closely follow the crest of the primary oceanfront sand dune as well as a setback line at least 20 ft landward of and parallel to the baseline. These lines are used by the SCCC in granting or denying permits for coastal construction, based on guidelines spelled out in the act. This chapter contains an inventory of existing locations and descriptions of man-made structures within 50 ft of the setback line as established by the SCCC.

Analysis of Inventory

The inventories are detailed on map overlays 412S through 432S. Inventories are also found in tabular form in Appendix A. On the overlays, the tax map parcel numbers are indicated, as well as street addresses and hotel names. Sizes of habitable structures were determined visually as was the general condition of erosion-control structures. Structural inventory categories are as follows:

A = Habitable structures less than 5,000 square feet in area

B = Habitable structures greater than 5,000 square feet in area

C = Recreational amenities (pools, piers, etc.)

D = Parking lots

E = Ancillary buildings (gazebos, pool houses, garages, etc.)

The inventories reveal about 40 structures seaward of the baseline, with the greatest concentration of these near the Cherry Grove pier. Numerous other structures encroach on the setback line. In the Cherry Grove area, the baseline and setback line are very close to Ocean Boulevard so that all structures seaward of this main thoroughfare are in structural location class 1, seaward of the baseline. This is the case from about 23rd Avenue North to 39th Avenue North. Not coincidentally, the greatest concentration of hard erosion-control structures is also found in this area. In general, both habitable and erosion-control structures are in good repair. In some cases, rock revetments have collapsed so that they are no longer functional. These are inventoried as class 4.

In other areas of the city, structures found seaward of the baseline are primarily pools and erosion-control devices. Although the orthophoto maps indicate the baseline and setback line pass through existing buildings, none are completely seaward of the baseline. In many cases, there is room to develop the site in conformance with current regulations, in the event the existing structure is destroyed.

Recommended Ordinances

The city has in place an ordinance addressing building inspection (Exhibit D) and removal of unsafe buildings. The zoning ordinance regulates construction along the shorefront through development (setback and height) standards of zoning districts and also special requirements of the coastal protection overlay district. These regulations were significantly amended in 1988 to provide greater building setbacks and limitations on use of W-1 (waterfront pleasure district) property. Together, these regulations adequately address construction and reconstruction along the coast. These ordinances are generally more stringent than state guidelines (see land use and zoning). No additions or changes are recommended.

Summary

The coastline of the City of North Myrtle is highly developed up to and, in some cases, beyond the ideal dune line. Existing buildings and erosion-control devices are in good repair, largely as a result of extensive cleanup and renovation after Hurricane *Hugo* in 1989. Future construction and reconstruction will be in accordance with state law and local zoning ordinances.

LAND USE AND ZONING

Introduction

Zoning requirements for the city are defined in the *Code of Ordinances of the City of North Myrtle Beach* (Chapter 23, Zoning), published by order of the city council. In addition to the standard zoning districts throughout the city, a coastal protection overlay (CPO) district was added to the zoning regulations in 1989 to control erosion, preserve and maintain the beach and its environs, safeguard property, and promote safety and welfare of the community. These zones are shown on the zoning orthophoto map overlays (412D-432D). A city zoning map is shown in Figure IV-2. The city's land-use policies are contained in the Comprehensive Land Use and Development Plan adopted in 1988.

Zoning Classifications

The zoning district boundaries are shown on map overlays 412D to 432D. Following is a description of zones within the area regulated by the Beach Management Act and a brief discussion of their purposes.

- R-1 Single-Family Residential Low Density. Includes single-family detached dwellings (excluding mobile homes), neighborhood parks and publicly owned recreational facilities unlighted for night use, churches, etc., with minimum lot sizes of 10,000 square feet. This district is intended to encourage residential infilling and expansion of existing neighborhoods reflective of existing conditions and to prohibit uses which would compromise existing conditions and uses.
- R-3 Mobile Home Residential District. Includes single-family detached, semi-detached, and duplex dwellings along with mobile homes on individual lots placed on permanent foundations and mobile home parks which meet various requirements providing harmony with the other dwellings. The district provides a full range of housing alternatives to meet buyer demands while maintaining compatibility. The only R-3 zone within this plan's area of concern is at the southernmost edge of the city, the site of Barefoot RV Resort Park.
- R-4 Resort Residential District. Includes all types of dwellings, hotels, motels, inns, and lodges, with attendant ancillary uses, such as parking, pools,

restaurants, newsstands, gift shops, etc. These uses must be located within the principal building and be accessible only from an interior court, lobby corridor, or pool deck. The purpose of this district is to provide for areas where both year-round and seasonal, or resort, housing may be developed to meet market demand and to promote year-round use of public facilities, but not at the expense of ocean visibility and access by the community.

RC — Resort Commercial District. Includes motels, hotels, inns, lodges, multifamily dwellings, and high-rise apartments. Also included are retail stores, service businesses (such as laundromats, barber shops, photo studios, restaurants), and commercial recreation establishments (such as theaters, video gamerooms, water slides and putt-putt courses, and sports rental equipment facilities). The purpose of this district is to provide areas where commercial uses may be established and tourist and visitor attractions enhanced. These districts are relatively small to maximize cumulative attraction and minimize the adverse effects of these types of uses on nearby residential developments.

W-1 — Waterfront Pleasure District. Includes beach area between the mean low watermark and the ideal present dune crest as established by the SCCC in the 1986 shorefront management plan or to an existing seawall if the seawall is seaward of the ideal dune crest. This district is established to preserve the public beach for recreational use and protect it against intrusions from commercial, residential, and industrial usage.

CP — Conservation Preservation District. Includes marshes and tidal waters where such activities as fishing, shellfishing, boating, swimming, and nature study are conducted. Allowed are publicly owned and/or operated parks, docks, landings, and private docks and boathouses. The purpose of this district is to preserve those natural areas that possess great natural beauty and are the breeding grounds and refuges for marine life, birds, and land animals. The areas also provide natural drainage basins for surface water runoff as well as open space for general outdoor recreational use. The largest CP district is the 450-acre marsh in the Cherry Grove section of North Myrtle Beach.

PUD — Planned Unit Development District. This district is intended for undeveloped areas of greater than two acres or relatively large areas undergoing redevelopment, where planned unit development is a superior response to less coordinated development. Its purpose is to promote the most appropriate use of the land, to improve the

design and character of new development, to facilitate the provision of streets and utilities within the area, and to preserve the natural beauty of open areas.

CPO — Coastal Protection Overlay District. As previously mentioned, the district overlays the entire shore with individual zoning districts intact within it. The CPO district includes all areas east of Ocean Boulevard. Its purpose is to control erosion, preserve and maintain the beach and its environs, safeguard property, and promote the safety and welfare of the community. This zone is used to ensure compliance with all pertinent laws of the state resulting from the Beach Management Act.

Analysis

Zone W-1 (Waterfront Pleasure District) and the Coastal Protection Overlay District (or CPO) are the two districts most relevant to the Beach Management Act of 1990. Exhibit E contains copies of these two sections of the zoning ordinance. Zone W-1 extends from the ideal present dune crest (as established by the SCCC in the 1986 shorefront management plan) to the mean low watermark and basically includes the public sand beach. The city ordinance allows no construction in this area, with the exception of public piers by special exception, after permitting by the SCCC. Uses permitted in W-1 are fishing and recreation, swimming, nature study, and beach franchise activities (such as lifeguards and concessions).

The CPO district overlays existing zones with additional limits of usage and all development seaward of the centerline of Ocean Boulevard. This portion of the zoning ordinance limits construction and reconstruction beyond the city's building control line, which is 20 ft landward of the ideal present dune crest. Habitable structures are limited to a total of 4,500 square feet with a limit on first-floor area size of 2,250 square feet, including decks, garages, patios, etc. Section 23-31(7) of the CPO regulations requires evidence of compliance with the Beach Management Act, or a permit from the SCCC, prior to application for a building permit from the city. This section of the zoning ordinance also provides regulations for nonconforming structures which apply to properties in the CPO district. The zoning ordinance also contains provisions for nonconforming uses throughout the city.

The city's zoning ordinance, which affects beachfront management, was reviewed by the SCCC for compatibility with the Beach Management Act, and the SCCC found no conflicts of concern (see Exhibit F, a letter date 5 October 1988, from the SCCC to the city regarding this review). As indicated, the ordinance requires reevaluation by 1 February 1994.

Recommended Ordinances

The city's existing zoning ordinance was amended in 1988 and adequately provides protection of the beach/dune system from violation of tenets set forth in the Beach Management Act of 1990. Construction limits are generally more stringent than those of the state act. No further additions or changes to the ordinance are recommended at this time.

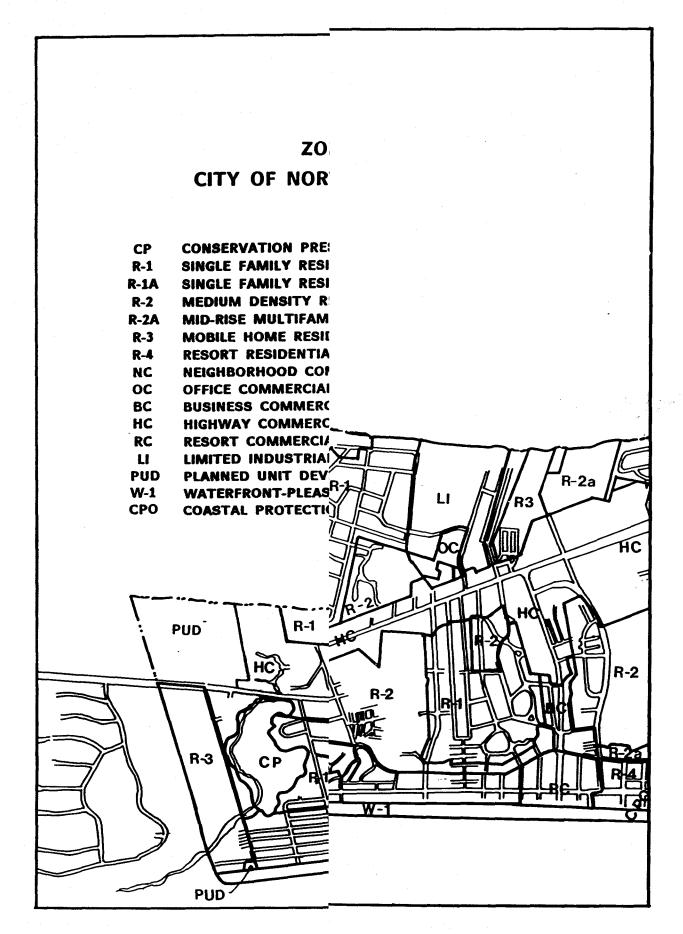


Figure 1V-2, p.1 of 2

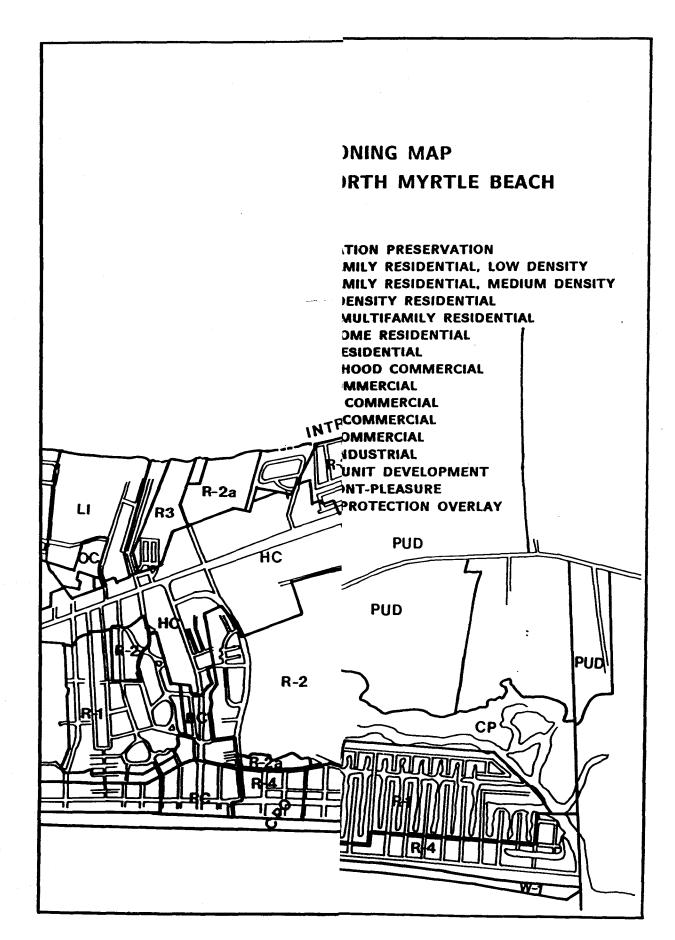


Figure IV-2, p.2 of 2

BEACH ACCESS AND PARKING

Introduction

The South Carolina Beach Management Act finds that the state's beach/dune system provides a natural and healthy environment for the citizens of the state and that it is in the state's best interest to protect and promote increased public access to the beaches for both out-of-state tourists and South Carolina residents. To achieve this access, the act requires the SCCC to develop guidelines for preserving and enhancing public access. (The SCCC's guidelines are included in Exhibit G.) This section details existing access and parking availability and provides for future enhancements to public access for the City of North Myrtle Beach.

Inventory of Beach Access and Parking

The beach access and parking inventory is shown on map overlays 412P through 432P. The following items are inventoried on these sheets:

- All public access points (inventoried as PA).
- All private access points with dune walkover structures (inventoried as PRP).
- All public parking lots infringing on the baseline or setback line (inventoried as 3).
- Any private parking lots seaward of the setback line (inventoried as 2).
- All public parks.
- All vehicular access points.
- Other miscellaneous facilities available at these locations.

Private parking spaces which are not seaward of the setback line are not included; neither are private accesses without dune walkovers which, by agreement with the SCCC, are too numerous to inventory and do not directly provide public access. Where distances to access from each parking lot are shown as dashes, the access point is at the lot. The true impact of numerous private (i.e., motel/hotel) parking spaces on public access will be discussed later. The tabular inventories are shown on the overlays as well as in Appendix B.

All inventoried public accessways are clearly marked. In 1989, the city held a series of public hearings and officially accepted the dedication of all oceanfront walkways and street ends. The purpose was to allow the city to preserve and maintain these accessways for public use. Surveyed in 1990, maps of these accessways are on file in the RMC office of Horry County. Trash receptacles are either available directly adjacent to each beach accessway (mostly at street-end parking and access areas) or within 200 ft of the accessway on Ocean Boulevard. All public accessways have been treated with crushed shell or grass for any pedestrian traffic, and only 45 of 220 accessways do not have dune walkover structures. A community park at 1st Avenue South (map 422P) provides parking, playground, showers, concessions, lifeguard, etc. In addition, the city provides lifeguard services along the entire beach through a private contract.

The city is laid out along a series of streets running perpendicular to the coast from 63rd Avenue North, near Hog Inlet, to 48th Avenue South. The city has title to many street ends between platted lots on the beach side of Ocean Boulevard and has just completed a project improving 23 of these street ends to enhance public access at a cost to the city of approximately \$600,000. The cost of these improvements is summarized in Exhibit H. The street ends are paved and landscaped, providing parking, dune walk-overs, handicapped areas, trash receptacles, and lighting. Table IV-1 summarizes the number of publicly owned walkways and street ends available in North Myrtle Beach.

Analysis and Plan

An "access" layer was created separately in AutoCad™ for analysis of public access to determine whether full and complete access exists as required by SCCC guidelines. These layers as well as the parking layers are plotted on copies of map overlays 412P through 432P. According to the guidelines (Exhibit G), a minimum of six public parking spaces, improved walkways, trash receptacles, and signage are required before credit is allowed for a public access. A variable distance to either side of such access is allowed for full and complete access, based on quantity of parking spaces and other available facilities. Table IV-2 lists the applicable maximum access lengths along the shoreline for various minimum numbers of parking spaces based on the SCCC's

published guidelines (Exhibit G). The allowable distance in feet from each acceptable public access point is drawn in to scale (1 inch = 100 ft) and is labeled on the overlays.

Review of the access layer data reveals that the entire shoreline within the City of North Myrtle Beach complies with the state guidelines for full and complete access. In fact, in most instances, beach users have at least two points of access from which to choose when seeking access to the beach. All sections of the city have at least one access point with minimum parking. Some sections, such as the area around Main Street, have five or six overlapping parking access points. Signage is provided at each access according to the design presented in Exhibit I.

In addition to numerous public access and parking sites, there are thousands of private spaces at hotels, motels, piers, recreational vehicle (RV) parks, and rental units. No one is excluded from these facilities; indeed, many advertising dollars are spent to attract vacationers to them.

Private lots situated **seaward** of the setback line are shown on the overlays. However, many more private lots situated **landward** of the setback line are not shown in this document or on the overlays.

Recommended Ordinances

The city has implemented ordinances providing guidelines for what is allowed on the beach. These ordinances address pets, littering, alcohol consumption, as well as driving motor vehicles on the beach. Presently, driving is prohibited for nonessential uses from 1 March through 31 November of each year. The 1990 Beach Management Act requires the SCCC to develop regulations for driving on the beaches to include prohibiting vehicular traffic on the beach for nonessential uses. The guidelines for the regulation of vehicular traffic on the beach are included in Exhibit J. The city meets all guidelines with existing ordinances except number three. It is recommended that the city revise their ordinance to limit driving on the beach for nonessential uses for the entire year and to define essential uses as law enforcement and medical emergencies with construction and commercial fishing, and any other special needs to be allowed by special permission only.

The city code contains regulations regarding the construction and reconstruction of piers (Exhibit K). The ordinance requires the pier owner to sign a franchise, which, among other things, allows the public full access to the pier. Any pier constructed or located on the public beach or public waters within the City of North Myrtle Beach must now be freely accessible by the public. The pier at Cherry Grove is shown on overlay 427P. Another pier (shown on overlay 431P), which was damaged by *Hugo*, will allow public access if it is rebuilt.

Summary

The intent of the SCCC's beach access guidelines is to guarantee full public access to the beach. This public access must include facilities for parking, transportation, as well as safe and comfortable walkways to the beach. The City of North Myrtle Beach complies fully with the criteria of the guidelines. Overlays 412P through 432P inventory existing parking and access points as well as available accesses for each stretch of beach. The city has 174 public walkways to the beach and 53 public street ends with a total of well over 1,000 city-maintained public parking spaces adjacent to the beach. In addition, there are thousands of rental opportunities which meet a wide range of budgets for tourists who stay overnight, with additional parking available for them. During the summer season, approximately 100,000 tourists, daily, have access to the beaches of North Myrtle Beach. The city is committed to providing improved access to the public and spent approximately \$600,000 during 1990 for improvements to parking areas and walkways.

TABLE IV-1. Public walkways and street ends maintained by the City of North Myrtle Beach.

Beach Section	Walkways	Street Ends	Other
Windy Hill	17	22	
Crescent Beach	25	8	
Ocean Drive	33	22	1 park
Cherry Grove	99	1	
Total	174	53	1

TABLE IV-2. Types of beach public access and applicable shoreline lengths. [*Other facilities required as a function of size including showers, restrooms, concessions, etc. See SCCC Guidelines (Exhibit G).]

Туре	*Minimum Parking Facilities	Applicable Shoreline Access
Public access point	6 parking spaces	660 ft north and 660 ft south of access point
Local public access park	10 parking spaces	1,320 ft north and 1,320 ft south of access point
Neighborhood public access park	25 parking spaces	2,640 ft north and 2,640 ft south of access point
Community public access park	75 parking spaces	3,960 ft north and 3,960 ft south of access point
Regional public access park	150 parking spaces	5,280 ft north and 5,280 ft south of access point

DRAINAGE INVENTORY

Introduction

This chapter reviews stormwater drainage along the beach in North Myrtle Beach, an issue that concerns both the SCCC and the city. The two main sections of the city, Ocean Drive and Crescent Beach, slope toward the Atlantic Ocean, and the natural drainage has always been toward the beach. Dense development along the beachfront, with many paved parking lots and rooftops, has increased the amount and changed the quality of runoff. To reduce flooding in the past, the city developed a drainage system that included open-pipe drainage directly to the beach. The undesirability of stormwater outfalls on the beach is more obvious now than in the past with the possibility of water pollution (from pavement oils, lawn insecticides, and animal waste) and erosion of the beach itself (from large outflows).

The city began steps to rectify the beach outfall problem several years ago, commissioning a stormwater management study which was completed in 1985 and enacting a stormwater management ordinance in the same year. Additional information available in the city engineer's office includes an *Alternative Analysis of the North Myrtle Beach Stormwater Management Study*, which is part III of the 1985 stormwater management study and makes specific recommendations for drainage improvement. The goal of the ordinance is to eliminate the increase in stormwater runoff as a result of development. The city has undertaken a stormwater improvement program based on the recommendations of the 1985 stormwater management study, and many of these improvements are being performed in conjunction with its street improvement program which has been given top priority in every annual budget since fiscal year 1988. These drainage improvements will continue to be installed until all recommended drainage improvements are completed.

The following sections describe the present status of oceanfront outfalls and drainage basins along the beach and projects to-date which have reduced the problem. Finally, the city's long-range strategy is given, based on existing ordinances and stormwater management plans.

Analysis of Inventory

Map overlays 412D through 426D and 428D through 429D depict the 32 drainage basins within 1,000 ft of the beach. The basins are named according to their locale. The Windy Hill area basins are named WH1, WH2, etc.; Crescent Beach is CB; Ocean Drive is OD; and the one Cherry Grove basin is CG1. Beginning with 412D and moving north:

- 1) WH1 and WH2 jointly comprise ~41 acres. These basins consist of soils with very high infiltration rates and depths. Open drainage ditches and piped storm sewers discharge stormwater to the White Point swash system.
- 2) WH8 is ~20 acres of well-drained soil extending along 45th Avenue South to 43rd Avenue South from Pinecrest Street to the ocean. A 36-inch discharge pipe to the beach handles storm overflow.
- 3) WH5 is ~ 10 acres of well-drained soil with a small, 12-inch drainage pipe to the beach.
- 4) WH11 consists of ~12 acres of well-drained soil with overflow through a 36-inch pipe to the beach. The pipe is designed to eventually handle overflow from WH5 and WH11, eliminating the 12-inch pipe at WH5.
- 5) WH6, ~83 acres of well-drained soil, extends from 39th Avenue South to 33rd Avenue South. Three pipes discharge overflow to the beach at 36th and 37th Avenues South. Extensive new filtration systems have considerably reduced flow from these pipes.
- 6) CB1 and CB2, in Crescent Beach, comprise ~22 acres and consist of both well-drained and poorly drained soils. Outfall to the beach from CB1 is through an 18-inch pipe. CB2 has a 15-inch pipe which reduces to 12 inches, creating a bottleneck. At times of heaviest storm events, overflow water is routed to CB1.
- 7) CB3 extends from 23rd Avenue South to 19th Avenue South. The major storm drainage for this ~107-acre basin is along 21st Avenue South with 24-inch and 30-inch pipes discharging onto the beach.
- 8) CB4 and CB4A together include ~15 acres of well-drained soils. Basin CB4A has no existing pipe system; drainage is transported to Ocean Boulevard where minor

- ponding occurs. The CB4 pipe system begins at the catch basin at Holly Drive and extends along 18th Avenue South to the beach.
- 9) CB5 comprises ~105 acres of well-drained soil between 18th and 19th Avenues South. A small network of pipes to the beach is adequate for storm drainage.
- 10) CB5A is contained within the roadway of 17th Avenue South from Havens Drive to the ocean. This mostly asphalt area is drained through a 36-inch pipe to the beach.
- 11) CB6 consists of ~36 acres of well-drained soil with storm overflow directed to the beach between 16th and 17th Avenues South through a 24-inch pipe.
- 12) CB7 comprises ~ 18 acres of well-drained soil between 15th and 16th Avenues South with storm overflow directed to the beach through a small 15-inch pipe system.
- 13) CB7A is a small basin between Perrin Drive and Ocean Boulevard consisting of well-drained soil and a small overflow pipe to the beach.
- 14) CB8, situated between 15th and 11th Avenues South, consists of ~108 acres of both poorly and well-drained soils. Storm overflow is routed to the beach via a 42-inch pipe as well as to a pond off 14th Avenue South.
- 15) OD1, ~192 acres of well-drained soil, is located between 11th and 9th Avenues South with drainage through a small pipe system along Ocean Boulevard exiting an 18-inch outfall to the beach.
- 16) OD1A, a well-drained and sparsely developed basin of ~4 acres, has no existing pipe system.
- 17) OD14 is a large basin of \sim 192 acres. Much of the basin is undeveloped, low-lying woodland. Drainage consists of a pipe system along Ocean Boulevard with outfall to the beach through a 36-inch pipe.
- 18) OD3 is an ~10-acre basin of well-drained soil between 5th and 3rd Avenues South with storm drainage to the beach through a 24-inch pipe.
- 19) OD4 is an ~3-acre basin surrounding 2nd Avenue South and has an 18-inch pipe for storm drainage to the beach.
- 20) OD5 extends from 2nd Avenue South to Main Street. The drainage network for this ~9-acre basin includes a pipe system along 1st Avenue South which extends from a discharge pipe at McLean Park Pond to the ocean.

- 21) OD6 is an ~21-acre basin consisting of Main Street and its commercial environs. Storm runoff is through pipes along Main Street to a 36-inch discharge pipe at the ocean.
- 22) OD7 is ~13 acres of well-drained soil between 1st and 2nd Avenues North. A small pipe system routes storm drainage to the beach through a 24-inch pipe.
- 23) OD8 and OD9 together consist of ~17 acres of well-drained soil between 2nd and 4th Avenues North. An 18-inch pipe and a 24-inch pipe carry storm runoff to the beach.
- 24) OD10 has well-drained soils throughout its ~58 acres between 4th and 11th Avenues North. The drainage network in this basin consists of a pipe system connecting a pond to the west with the beach and a north-south infiltration ditch. The pond acts as a retention area for runoff until stormwater conditions route pond overflow through pipes to the beach.
- 25) OD20, an ~72-acre basin with well-drained soil, consists of residential development.

 An open infiltration ditch-is effective in reducing runoff through the 24-inch pipe to the beach at 12th Avenue North.
- 26) OD21 is an ~43-acre basin between 15th and 18th Avenues North. An open infiltration ditch reduces runoff. A pond also acts as a retention basin with an overflow pipe connected to the beach discharge system.
- 27) OD19 is the largest basin consisting of ~381 acres between 18th Avenue North and Sea Mountain Highway. The basin, containing both well-drained and poorly drained soils, is largely undeveloped. The drainage system consists of piped storm sewers, open ditches, and large lakes. The lakes provide retention/detention areas. Final stormwater runoff is to the marsh through pipes.
- 28) CG1 is an \sim 30-acre basin containing well-drained soils and flat slopes. Overflow discharge is routed through pipes to the marsh area.
- 29) From CG1 north, there are four pipes from Ocean Boulevard to the beach to prevent flooding in the streets. Stormwater runs back naturally toward the canals from Ocean Boulevard.

Drainage Plan Development — Modification and Reduction of Outfalls

The city's stormwater management ordinance, enacted in 1985, as well as SCCC permitting requirements serve to eliminate the increase in stormwater runoff as a result of development. According to the ordinance, individual construction or modification of sites must provide on-site retention/detention systems that will maintain predevelopment runoff conditions. Pool overflow and deck outfall structures are not allowed for new construction or modification. One pool drain and two wall drains remain; these are shown on map overlays 428D and 418D. The city has rigorously enforced the stormwater management ordinance since its adoption. The result has been that all development has stormwater retention facilities installed. More than 50 of these retention systems have been installed over the last three years.

The 1985 Stormwater Management Study, Phase III, Alternative Analysis, commissioned by the city, is the most detailed source which outlines the strategies for reduction of outfalls to the beach. Many of the recommendations in the study have already been implemented (e.g., consolidation of CB1 and CB2). Some strategies, such as the consolidation of OD8 and OD9 outfalls, actually eliminate outfalls, while other strategies, such as the OD3 and OD4 consolidation, use existing outfall systems to handle conditions that previously could have resulted in a new outfall to the beach.

Percolation systems are an integral part of the city's plan to reduce total discharge of stormwater along the beach. Since 1986, the city has installed 19,000 ft of 15-inch to 36-inch percolation pipe. These percolation systems allow stormwater to infiltrate the groundwater at appropriate points according to topography and sediment type and not be discharged to the beach. Figure IV-3 illustrates a cross-section of the type of percolation system used throughout the city. Other specific methods the city has utilized to reduce discharge to the beach are retention basins and the use of lakes and other storage areas for stormwater discharge. During 1990 alone, the city eliminated approximately 81.5 cubic feet per second (cfs) of stormwater that would have been discharged to the beach. Some of the recently completed projects which have reduced discharge to the beach are listed in Table IV-3. The city will continue to install percolation pipes to reduce the amount of discharge to the beach.

Recommended Ordinances

The stormwater management ordinance (Exhibit L), adopted in 1985, provides authority to upgrade the existing stormwater drainage system and ensure compliance for new development. The ordinance follows the guidelines set forth in the SCCC's 1988 stormwater management guidelines. No changes are recommended.

Summary

The City of North Myrtle Beach, south of Cherry Grove, is located on gently sloping topography with stormwater runoff naturally flowing to the beach. The northern portion of the city, in Cherry Grove, slopes toward the canal system from Ocean Boulevard. Existing outfalls to the beach are outlined in Analysis of Inventory and are shown on map overlays 412D to 430D. Past efforts to reduce total stormwater runoff to the beach include basin outfalls, construction of infiltration systems, and prevention of new outfall construction. A city ordinance reflects the SCCC guidelines for stormwater management and the city's commitment to the reduction of stormwater discharge to the beach. The city will continue to install exfiltration systems as part of the ongoing construction and maintenance plan.

TABLE IV-3. Recently completed projects which have reduced discharge to the beach.

Project	Stormwater Runoff Diverted (cfs)	Method of Reduction
Fairfield Westwind Condominiums	4.1	Percolation
Sunset Drive	5.4	Percolation
3rd Avenue South	25.0	Lake
Pavilion Liquor Store	5.2	Percolation
NMB Primary School	3.53	Percolation
Heights at Windy Hill	17.4	Percolation
TJ's Hamburger	7.26	Retention
Springland Drive	10.67	Lake
Palm Street	3.60	Percolation

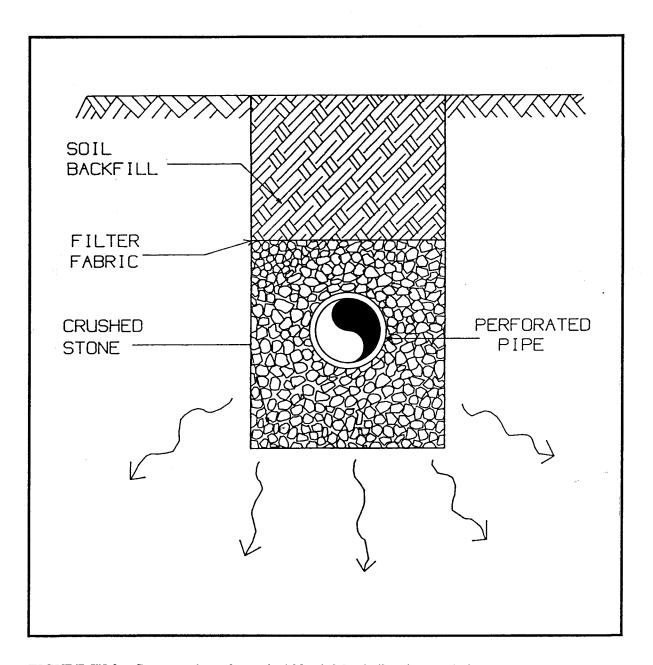


FIGURE IV-3. Cross-section of a typical North Myrtle Beach percolation system.

ENDANGERED SPECIES

Introduction

The highly developed nature of North Myrtle Beach means there is little critical habitat as defined by the SCCC. Conversations with staff at the SCCC and South Carolina Wildlife and Marine Resources Department's (SCWMRD) Heritage Trust have confirmed this lack of critical habitat in the area. One plant, *Sabatia kennedyana*, is recorded in the area by Heritage Trust. Commonly known as Plymouth gentian, Heritage Trust rates the plant as very rare throughout its range, or found locally in a restricted range, or having factors making it vulnerable. Exhibit M is a letter from SCWMRD describing the occurrence of the plant with a sketch of the plant and its recorded location. This location is also designated on map overlays 421D and 422D on the zoning and drainage overlays.

Protection Plan

The city, through its zoning ordinance, creates a conservation preservation (CP) district which recognizes the importance of preserving natural estuarine land and water habitat. Furthermore, the city's Comprehensive Land Use and Development Plan contains two policy objectives which stress the protection of the beach and marsh areas within the city (Exhibit N). Many of the recommended actions have already been accomplished. In 1990, approximately 250 acres of the Cherry Grove marsh were rezoned from R-4 to CP. Exhibits O and P are respectively the SCCC's *Guideline for Protection of Endangered Species* and *Model Beach Lighting Ordinance*. These are included for present reference and perhaps future adoption, should conditions warrant.

The protection and enhancement of a viable beach/dune system will provide habitat for numerous species of plants and animals. The vegetation within this system is unique and extremely important to the vitality and preservation of the system. The city has spent hundreds of thousands of dollars (see Beach Access and Parking) to provide dune walkover structures as well as to coordinate sand-fencing installation and vegetation plantings with local civic groups.

In addition, the City of North Myrtle Beach will request assistance from the SCWMRD's Heritage Trust to more closely define the area serving as habitat for *Sabatia kennedyana*. If applicable, the city will notify the property owners and take other measures to increase public awareness of this issue.

BEACH EROSION CONTROL PLAN ALTERNATIVES AND ANALYSIS

Several shore-protection techniques have been implemented along the shoreline of North Myrtle Beach since the 1950's.

Seawalls, Bulkheads, and Revetments

Despite an historically low erosion rate, about 25 percent of North Myrtle Beach's shoreline is armored with seawalls, bulkheads, and revetments. Structures range from vertical concrete or timber walls to sloping rock revetments of various sized armor units. Crest elevations vary and most walls do not appear to be engineered for a particular return-period wave. Scour at the base of the walls remains a chronic problem where the dry beach has been lost (including Cherry Grove). With the exception of right-of-ways at street ends, almost all shore-parallel structures have been placed and paid for by private interests. Under the 1990 amended Beach Management Act, no new seawalls can be constructed. However, existing walls may be maintained in a comparable configuration.

Groins

The remains of several timber groins exist at Hog Inlet north of 62nd Avenue North. These structures were placed during the 1960's but have fallen into disrepair. Presently, they provide little function in trapping sand because the piles are an open structure, and the small quantity of rock used for toe protection has settled into the sand. Sand accretion over the Hog Inlet shoals and along the seawall segment west of Ocean Boulevard is further evidence of the poor functioning of these structures at present.

Sand Scraping

Following Hurricane *Hazel* (1954), the northeasters of 1986-1987, Hurricane *Hugo* (1989), and other unnamed northeasters, the city, state, federal government, and private interests have scraped sand from the wet-sand beach and placed it along the back beach in an effort to protect properties. In some cases (e.g., *Hazel* and *Hugo*), washover sand has been collected from roads and adjacent properties and placed back on the beach. While this is not nourishment by the true definition because it does not provide a new

source of sand to the littoral zone, it has been a common practice. Sand scraping can be implemented quickly after storms and generally can be performed at a fraction of the cost of other shore-protection measures. Its success is variable, tending to work well along unarmored reaches that had a healthy sand supply and well-formed dunes before a storm. But it is ineffectual for more than a few months along armored reaches that lack a dry beach before storms.

Beach Nourishment

North Myrtle Beach has completed only two nourishment projects. The first was a large-scale 372,260 cubic yard (cy) emergency nourishment following *Hugo* (December 1989 to February 1990). The second was a small-scale ~28,000 cy remedial nourishment project between 59th and 62nd Avenues North in January 1991. Borrow source for the large project was accreted shoals at Hog Inlet, northeast of the developed shoreline. Borrow source for the remedial nourishment project was an inland pit about eight miles from the beach. Total expenditures on these nourishment projects has been about \$2 million (approximately \$47/ft of shoreline).

Dune Enhancement and Revegetation

Various measures for dune enhancement and revegetation have been performed since the first development along North Myrtle Beach. Efforts include sand fencing, use of discarded Christmas trees, brush, and other debris to trap sand, transplanting of sea grasses, and construction of dune walkovers. During the past decade, ad hoc efforts at dune enhancement have become organized city-wide under SCCC criteria and guidelines, as well as the city's program to supply property owners with plant sprigs and planting instructions. The largest coordinated effort was accomplished after *Hugo*. The first phase involved construction of the emergency dune by sand scraping in October 1989. The final phase involved sprigging the new dune with American beach grass, panicum, and sea oats in March-April 1990. Sand fencing was placed along unarmored sections to help stabilize the new dunes. Success was mixed with an estimated 50 percent of the new dunes remaining viable through the 1991 winter. The city has constructed 187 dune walkovers since 1980.

Building Relocation

In general, redevelopment along the oceanfront has involved enlargement of structures. There are no known examples of improved setbacks with redevelopment prior to 1988. With many lots large enough to accommodate both setbacks and buildings, it is anticipated future redevelopment will entail better building location in conformance with the city's present zoning ordinance and state law.

Future Plan

Under the Beach Management Act (BMA), the number of shore-protection options are limited. New seawalls are prohibited and existing structures cannot be upgraded to protect from higher wave/water-level events, rising sea level, or increased wave energy caused by continued erosion of the beach. The city has developed a strategy for beach erosion control within the framework of the BMA according to the following priorities:

- 1) Maintain existing structures. Upward of 25 percent of the shoreline and considerable infrastructure (roads, utility lines, sewer lines) depend on the protection of existing seawalls. Until other measures can be implemented to rebuild the beach dune system, the integrity of these structures is critical. At present, none are considered damaged beyond repair.
- 2) Implement a large-scale nourishment project. Estimates of nourishment requirements for North Myrtle Beach have been prepared by the USACE and SCCC (Kana, 1990). Under different longevity assumptions, the estimates range from 665,000 cy for a ten-year recreational beach project to ~1.8 million cubic yards for a project providing additional storm-surge protection. Cost estimates range from about \$4.5 million to \$17 million with the borrow source assumed to be inland sand deposits or shoals off the closest inlets. The optimal level of effort remains uncertain until further analysis. However, the city believes shoreline monitoring after any projects will be critical to defining future needs. The emergency nourishment project provides a benchmark but because of its timing of

- following a large storm, its performance cannot be compared directly to normal conditions. That particular project benefits from the poststorm recovery that follows all major erosion events.
- 3) Development and redevelopment setbacks. With most of the shoreline developed, little can be done over the short term to set back structures further from the beach. However, under state and city laws, new buildings and redevelopment of existing lots will be subject to setback lines. The majority of structures existing in 1991 could be rebuilt landward of the city's or state's setback line. For areas having shallow lots (e.g., Cherry Grove) or large complexes that cover almost the entire lot, setbacks will be more difficult to accommodate. Situations will be reviewed by the SCCC on a caseby-case basis. While the SCCC may now grant special permits for structures seaward of the baseline, the city's options are limited to renourishment and zoning regulations which must be developed in conformance with Title IV of South Carolina State Law. But the long-range goal is to maintain or produce artificially a viable drysand beach for recreation, a stable dune system for storm-surge protection, and adequate setbacks for protection and enhancement of property values and the tax base of the City of North Myrtle Beach.

V. 40-YEAR RETREAT STRATEGY

INTRODUCTION

Long-term beach erosion along North Myrtle Beach has occurred at a moderately low rate well under 1 ft/yr. While storm events can produce much more erosion, the net effect is generally small and short-lived. Even after storms as large as Hugo, the beach has tended to regain a major portion of the sand lost.

Oceanfront development along North Myrtle Beach is extensive and property values are high, by some estimates worth over \$5,000 per linear foot (1990). The combination of low erosion rates and valuable oceanfront property suggests a primary strategy for future beach management should be artificial nourishment. Analyses by the USACE (1983) and SCCC (1990) place the cost of nourishment at \$4 million to \$17 million over a period of 5-10 years. This equates to \$125 per linear foot to \$400 per linear foot, a fraction of the present value of oceanfront property.

In keeping with the state's long-range goal of shifting development further from the oceanfront, North Myrtle Beach plans a 40-year retreat strategy containing several elements:

Development and redevelopment setbacks. Where lots are seaward of Ocean Boulevard, new construction will be regulated by the CPO district regulations contained in the zoning ordinance (Exhibit E).

Revised setback line. The City of North Myrtle Beach will consider revising its building control line according to section 23-31(3) of the zoning ordinance.

Artificial beach nourishment. Areas experiencing a sand deficit as evidenced by lack of a dry-sand beach, exposed seawalls, absence of dunes, or shallow setbacks will be nourished artificially using sand from an

external source. The outcome of such projects will be monitored to determine the cost-effectiveness and longevity of the fill. The primary goal of large-scale nourishment will be replacement of the sand deficit, restoration of a dry-sand beach, and restoration of dunes. Cherry Grove is considered a prime area for such restoration work.

Small-scale beach nourishment and scraping. From time to time, localized erosion problems will develop due to shifts in the position of inlets or swashes and their effect on adjacent beaches, or from storms. Such problems will be addressed with smaller scale nourishment or emergency sand-scraping projects. The degree to which these activities is required depends on the performance of large-scale nourishment and success in relocating structures more landward.

Dune enhancement. The prerequisite for dunes is a viable, dry-sand beach. As a final phase of the city's 40-year retreat strategy, property owners will be encouraged to improve and enhance the height and sand volume in the foredune. The city will assist by providing vegetation and specific recommendations. The long-range goal is to create dunes with sufficient volume and elevation to withstand a 50-100 year return-period storm. Dunes eroded by large storms will be repaired in coordination with efforts to rebuild the dry beach.

SUMMARY

The city considers the natural consequences of erosion to be worse than possible landward shifts of the baseline and setback line because of the increased threat to development, loss of tourism revenue, and loss of aesthetic values. Therefore, should surveys document a continuing decline in beach width and volume or damages increase from storms, the city may endeavor to rebuild the beach artificially. This is presently considered to be the most economic approach to erosion. Accelerated sea-level rise may increase erosion rates but even a four-fold increase would leave North Myrtle Beach less

vulnerable than other South Carolina beaches such as central Hilton Head Island where erosion is 5-10 times faster.

Each year, the city will review erosion rate data and sand budgets from the SCCC and other sources and determine if any change in the above strategy is warranted. Through existing ordinances and the provisions of the 1990 Beach Management Act, the city will establish what types of rebuilding will be allowed within the setback zones over a range of damages.

VI. POSTDISASTER PLAN

INTRODUCTION

While the city is characterized by a pleasing environment and pleasant weather, its geographic location and native topography make it vulnerable to hurricanes and other storms. These storms can be deadly, resulting in loss of life and property. Hurricane *Hugo* was the worst storm in the past 35 years and was comparable in intensity to Hurricane *Hazel* in 1954, the storm of record for portions of the Grand Strand. During *Hugo*, 5 buildings, 17 pools, and 78 seawalls were destroyed beyond repair. Erosion of the beach profile left numerous oceanfront structures sitting on or close to the active beach after the storm. Property damage from *Hugo* in North Myrtle Beach is estimated at approximately \$54,000,000.

The Beach Management Act of 1990 finds that the beach/dune system protects life and property by serving as a storm barrier which dissipates wave energy and contributes to shoreline stability and that it is in the public interest to allow the beach/dune system to accrete and erode during storms as well as in its natural cycles. This can be accomplished in highly developed areas by an organized system of retreat from the beach/dune system. Part of this retreat will be brought about through destruction of property by natural disasters and the permitting process.

As part of the Local Comprehensive Beachfront Management Plan, the SCCC requires each community to develop a postdisaster plan to include plans for public safety, maintenance of essential services, cleanup, emergency building ordinances, and the establishment of priorities, as well as the inspection of structures to determine damage and repairability with respect to the Beach Management Act of 1990. The city revised its postdisaster plan (North Myrtle Beach Hurricane Emergency Operations Plan) in July 1990. This plan fulfills all SCCC requirements, is in accordance with the Beach Management Act of 1990, and is attached as a separate document. City ordinance, sections 6-146 through 6-153, provides procedures for moving or relocating unsafe buildings.

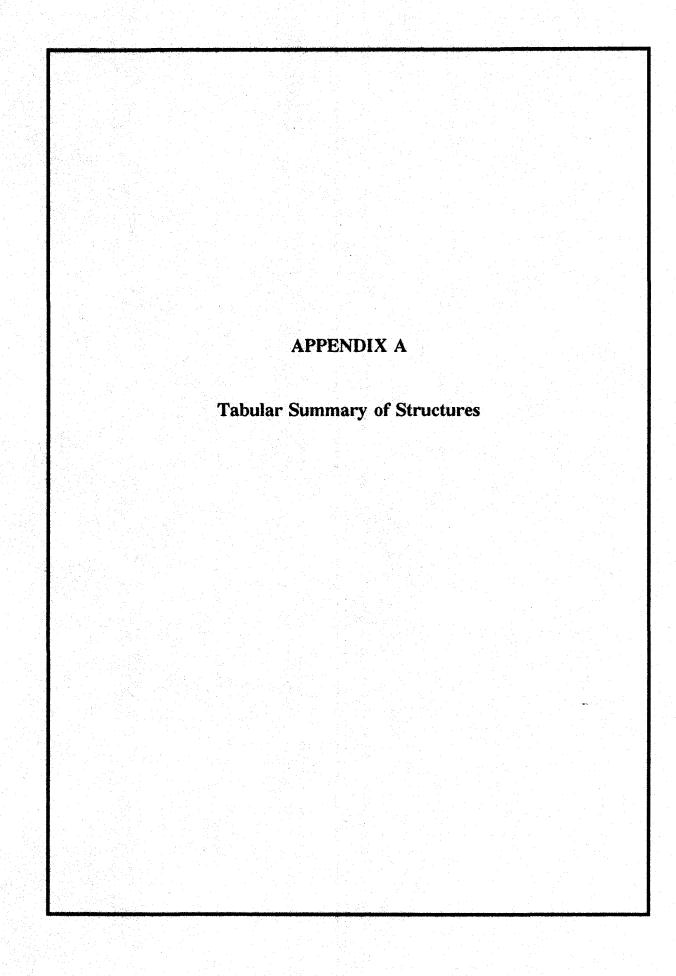
NMB HURRICANE EMERGENCY OPERATIONS PLAN

Following are those items in the emergency plan that relate directly to the beachfront management plan:

Action	Responsible Department
 Temporary and long-term storage and removal of debris 	Public Works
• Emergency orders along the beachfront	Public Safety
 Rebuilding of utilities, roads, drainage structures, etc. 	Public Works
 Postdisaster building inspection and and removal/relocation of buildings damaged beyond repair 	Building Department (ordinance sections 6-146 through 6-153)

SUMMARY

The importance of a postdisaster plan for any grouping of people cannot be overemphasized. Emotions such as fear, frustration, and anger can often override reason in times of huge storms or other disasters. The existing hurricane emergency operations plan for the City of North Myrtle Beach outlines necessary procedures and the chain of command to be followed during a disaster as well as addressing all items of concern in the Beach Management Act. City ordinance, sections 6-146 through 6-153, covers the removal of unsafe structures.



APPENDIX A. Structural inventory, City of North Myrtle Beach, South Carolina.

STRUCTURAL INVENTORY CLASSES:

A = Habitable structures less than 5,000 square feet in area B = Habitable structures greater than 5,000 square feet in area

C = Recreational amenities (pools, piers, etc.)

D = Parking lots

E = Ancillary buildings (gazebos, pool houses, garages, etc.)

[Occurrence of more than one of any given structure is indicated by a number in parentheses following the letter.]

STRUCTURAL LOCATION CLASSES:

1 = seaward of baseline2 =seaward of dead zone 3 = seaward of setback line 4 = within 50 ft of setback line

EROSION CONTROL INVENTORY:

1 = functional seawalls

4 = nonfunctional revetments5 = groins/jetties

2 = nonfunctional seawalls

3 = functional revetments

[*Existing structure >50 ft from setback line. **Vacant lot partially within baseline and/or setback line.]

Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
412 S	156-10-1-2			
	156-10-1-(11-275)	B(2),C(5),E(2)	4	
	156-10-1-5	À	4	
		C,B	4	
		Ē	3	
	156-06-35-(65-132)	Α	*	
	156-06-35- ?	B(2),C.D.E	3	
	156-06-35-4	В	4	
	156-06-35-(11-64)	C	3	
413S	156-06-36-(11-64)	В	4	
	,	С	3	
	156-06-21-(67-130)	B.C	3	
	156-06-21-9	**	_	
	156-06-21-8	**		
	156-06-21-7	**		
	156-06-21-6	В	4	1
	156-06-21-(13-66)	В	4	ī
	100 00 21 (10 00)	č	i	1
•	156-06-21-1	В	1	ī
•	130,00 21 1	D	3	ī
		Č	4	ī
	156-06-18-(63-118)	B,C	i	-
	150 00 10 (00 110)	E	4	
	156-06-18-(5-40)	B	i	
	130 00 10 (5 40)	Č	4	
	156-06-18-(42-62)	B	1	
	130 00 10 (42 02)	D	4	
	156-06-18-3	**	7	
	156-06-18-119	**		
	156-06-18-2	**		
	156-06-18-1	Α	4	1
	156-06-20-(2-10)	В	1	•
	156-06-20-(85-124)	В	ī	
		č	3	
	156-06-20-(11-31)	B,C	1	
	· · · · · · · · · · · · · · · · · · ·	D	4	

APPENDIX A. (continued) Structural inventory, City of North Myrtle Beach, South Carolina.

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A = Habitable structures less than 5,000 square feet in area

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Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
413S (cont.)	156-06-20-(62-82)	B D	1 4	1 1
4145	156-06-20-(85-124)	B C	1 3	
	156-06-20-(11-31)	B,C D	1 4	
	156-06-20-(62-82)	B D	1 4	1 1
	156-07-23-1 156-07-23-2	A **	4	
	156-07-23-(1-54) 156-07-23-6	B.C A	• 1 4	1
	156-07-23-(38-43) 156-07-23-8	B A	3 4	1
	156-07-23-9 156-07-23-(163-168)	A B	4 1	. 1
	156-07-23-11 156-07-23-(157-162)	**		
`	156-07-23-13 156-07-23-(14-37)	A B	4 1	
156- 156- 156- 156-	156-07-19-1	C A,B	3 1	
	156-07-19-(3-38)	C B,C	3 1	
	156-07-19-(91-108)	D B,C	4 1	
	156-07-19-41 156-07-19-42	A A	- 4 4	
	156-07-19-43 156-07-19-44	**	·	
	156-07-19-(153-195) 156-07-19-(141-146)	B,C B	1 1	
415S	156-07-19-(141-146)	В	1	
7130	156-07-19-(147-140) 156-07-19-(147-152)	B,C B	1 1	1
	156-07-19-54	Ā	4	

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Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
415S (cont.)	156-07-19-55	A	4	
1130 (00.10.)	156-07-19-(56-65)	B,C	i	1
	200 01 20 (00 00)	D	4	1
	156-07-19-67	Ā	3	
	156-07-19-(73-90)	В	1	
	156-07-19-(109-140)	В	1	
	200 0. 20 (200 200)	Ā	4	
416S	156-03-26-38	В	3	3
	156-04-26-5	В	1	
		D	4	
	156-04-38-(1-34)	В	; 3	1
	156-04-37-(10-39)	B,C	, 4	
	156-04-37-(40-93)	В	. 4	
	156-04-39-(1-36)	B,C	4	1
	156-04-36-87	· A	4	
	156-04-36-88	Α	4	
	156-04-36-89	Α	4	3
	156-04-36-(8-43)	B,C	3	3
•	156-04-36-(44-83)	B,C,E	4	1
	156-04-36-Ì	В	4	1
		C,E	1	1
	156-04-35-(98-121)	B,D	4	3
	156-04-35-23	В	4	1
	156-04-35-(5-22)	В	4	
	(*under construction)	C*		
417S	156-04-35-(98-131)	B,D	4	3
	156-04-35-23	В	4	1
	156-04-35-(5-22)	В	4	
	156-04-35-(26-97)	В	3	
	456.04.04.00	C.E	1	
	156-04-34-38	A	4	2
	156-04-34-37	В	4	
	456 04 24 (57 400)	E	1	4
	156-04-34-(57-100)	B,C,E	1	1
	156-04-34-(39-56)	B,C D	1 4	3
		U	4	

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1175 (cont.) 156-04-34-31	Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
156-04-34-(1-29) B 3 156-04-33-7 C.E(2) 1 156-04-33-7 A 4 156-04-33-6 B 4 156-04-33-5 B 3 156-04-33-4 B 4 3 156-04-33-1 B 156-04-33-1 B 156-04-32-1 B 156-04-32-(7-30) B 156-04-32-(7-30) B 156-04-32-(7-30) B 156-04-32-(34-128) B 156-04-32-3 B 156-04-32-3 B 156-04-32-3 B 156-04-32-3 B 156-04-32-1 B 156-0	417S (cont.)	156-04-34-31	A	4	1
156-04-34-(1-29) B	,				
C.E(2)					
156-04-33-7 156-04-33-6 156-04-33-5 156-04-33-4 156-04-33-4 156-04-33-1 156-04-32-1 156-04-32-1 156-04-32-(34-128) 156-04-32-2 156-04-32-2 156-04-32-2 156-04-32-1 156-04-32-2 156-04-32-1		, , ,	C.E(2)		
156-04-33-5 B 3 1 156-04-33-4 B 4 3 156-04-33-(8-55) B(2),C 1 3 156-04-33-1 B,C 1 1 156-04-32-31 B,C,E 1 1 156-04-32-(7-30) B,C 1 1 156-04-32-(34-128) B,C,D 3 E 4 1 156-04-32-(34-128) B,C,D 3 E 4 1 156-04-32-3 B 3 3 156-04-32-2 B,D,C 1 1 1 156-04-32-1 B(2),D,C,E 1 1 1 144-13-40-6 A 4 1 144-13-40-6 A 4 1 144-13-40-6 B 1 144-13-40-1 B 1 144-13-40-1 B 1 144-13-40-1 B 1 144-13-40-1 A,B 4 1 144-13-41-10 D 4 1 144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-6 B,D 1 1 144-13-41-5 A 4		156-04-33-7		4	
156-04-33-4 B 4 3 156-04-33-(8-55) B(2),C 1 3 156-04-33-1 B,C 1 1 156-04-32-31 B,C,E 1 1 156-04-32-(7-30) B,C 1 1 156-04-32-(34-128) B,C,D 3 E 4 156-04-32-(34-128) B,C,D 3 E 4 156-04-32-3 B 3 156-04-32-3 B 3 156-04-32-2 B,D,C 1 1 144-13-40-6 A 4 1 144-13-40-5 A 4 4 144-13-40-5 A 4 4 144-13-40-(7-18) B 1 D,C 4 144-13-40-1 A,B 4 144-13-41-1 B,C(2) 1 1 144-13-41-1 B,C(2) 1 1 144-13-41-1 B,C(2) 1 1 144-13-41-8 A 4 1 144-13-41-8 A 4 1 144-13-41-6 A 4 1 144-13-41-8 A 4 1 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 **		156-04-33-6	В	4	
156-04-33-4 B 4 3 156-04-33-(8-55) B(2),C 1 3 156-04-33-1 B,C 1 1 156-04-32-31 B,C,E 1 1 156-04-32-(7-30) B,C 1 1 156-04-32-(34-128) B,C,D 3 E 4 156-04-32-(34-128) B,C,D 3 E 4 156-04-32-3 B 3 3 156-04-32-3 B 3 3 156-04-32-2 B,D,C 1 1 144-13-40-6 A 4 1 144-13-40-5 A 4 4 144-13-40-5 A 4 4 144-13-40-(7-18) B 1 D,C 4 144-13-40-1 A,B 1 144-13-40-1 A,B 4 144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-8 A 4 1 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 **		156-04-33-5	В	3	1
156-04-33-(8-55) B(2),C 1 1 3 156-04-33-1 B,C 1 1 156-04-32-31 B,C,E 1 1 156-04-32-(7-30) B,C 1 1 156-04-32-(34-128) B,C,D 3 E 4 156-04-32-(34-128) B,C,D 3 E 4 156-04-32-3 B 3 156-04-32-3 B 3 156-04-32-2 B,D,C 1 1 144-13-40-6 A 4 1 144-13-40-5 A 4 1 144-13-40-4 A 4 1 144-13-40-(7-18) B 1 D,C 4 144-13-40-1 A,B 1 144-13-40-1 A,B 4 144-13-41-10 D 4 1 144-13-41-8 A 4 1 144-13-41-8 A 4 1 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 **		156-04-33-4		4	3
156-04-33-1 B,C 1 1 1 1 156-04-32-31 B,C,E 1 1 1 156-04-32-(7-30) B,C 1 1 1 1 156-04-32-(34-128) B,C,D 3 E 4 156-04-32-(34-128) B,C,D 3 E 4 156-04-32-3 B 3 156-04-32-2 B,D,C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			B(2).C		3
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156-04-32-(34-128) B,C,D E 4 156-04-32-(34-128) B,C,D B 156-04-32-3 B 156-04-32-3 B 156-04-32-2 B,D,C 1 144-13-40-6 A 144-13-40-5 A 144-13-40-7 B 144-13-40-1 A,B 144-13-41-10 D 4 144-13-41-9 A 144-13-41-7 B,D 1 144-13-41-6 A 4 1 144-13-41-7 B,D 1 144-13-41-6 144-13-41-6 144-13-41-6 144-13-41-6 144-13-41-7 B,D 1 144-13-41-6 144-13-41-6 144-13-41-6 144-13-41-5 A 4					1
E 4 156-04-32-(34-128) B,C,D 3 E 4 156-04-32-3 B 3 156-04-32-2 B,D,C 1 1 1 144-13-40-6 A 4 1 144-13-40-5 A 4 1 144-13-40-5 A 4 4 144-13-40-(7-18) B 1 D,C 4 144-13-40-1 A,B 4 144-13-41-11 B,C(2) 1 1 144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-7 B,D 1 2 144-13-41-6 ** 144-13-41-6 ** 144-13-41-6 ** 144-13-41-5 A 4					1
B,C,D E 156-04-32-3 B 156-04-32-2 B,D,C 1 156-04-32-1 B(2),D,C,E 1 144-13-40-6 A 144-13-40-5 A 144-13-40-7 B D,C 1 144-13-41-10 D 144-13-41-9 A 144-13-41-7 B,D 1 144-13-41-6 144-13-41-6 144-13-41-6 144-13-41-6 144-13-41-6 144-13-41-6 144-13-41-6 144-13-41-6 144-13-41-5 A B A A A A A A A A A A A		156-04-32-(34-128)		3	
E 4 156-04-32-3 B 3 156-04-32-2 B,D,C 1 1 156-04-32-1 B(2),D,C,E 1 1 144-13-40-6 A 4 1 144-13-40-5 A 4 144-13-40-4 A 4 144-13-40-(7-18) B 1 D,C 4 144-13-40-1 A,B 4 144-13-41-11 B,C(2) 1 1 144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-6 144-13-41-6 144-13-41-6 144-13-41-5 A 4			E	4	
156-04-32-3 156-04-32-2 156-04-32-1 156-04-32-1 156-04-32-1 144-13-40-6 144-13-40-5 144-13-40-5 144-13-40-(7-18) 156-04-32-1 156-04-32-1 156-04-32-1 156-04-32-1 156-04-32-1 156-04-32-2 156-04-32-1 156-04-32-2 156-04-32-2 156-04-32-2 156-04-32-2 156-04-32-2 156-04-32-2 156-04-32-1 156-04-32-2 156-04-32-1 156-04-32-2 156-04-32-1 1	4 18S	156-04-32-(34-128)			
156-04-32-2 / B,D,C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
156-04-32-1 B(2),D,C,E 1 1 1 144-13-40-6 A 4 1 144-13-40-5 A 4 144-13-40-4 A 4 144-13-40-(7-18) B 1 D,C 4 144-13-40-2 B 4 144-13-40-1 A,B 4 144-13-41-11 B,C(2) 1 1 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-6 *** 144-13-41-5 A 4					
144-13-40-6 A 4 1 144-13-40-5 A 4 144-13-40-4 A 4 144-13-40-(7-18) B 1 D,C 4 144-13-40-1 A,B 4 144-13-41-11 B,C(2) 1 1 D 4 1 144-13-41-9 A 4 1 144-13-41-7 B,D 1 144-13-41-6 ** 144-13-41-5 A 4					
144-13-40-5 A 4 144-13-40-4 A 4 144-13-40-(7-18) B 1 D,C 4 144-13-40-2 B 4 144-13-40-1 A,B 4 144-13-41-11 B,C(2) 1 1 D 4 1 144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-6 ** 144-13-41-5 A 4	`				
144-13-40-4 A 4 144-13-40-(7-18) B 1 D,C 4 144-13-40-2 B 4 144-13-40-1 A,B 4 144-13-41-11 B,C(2) 1 1 D 4 1 144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-6 ** 144-13-41-5 A 4					1
144-13-40-(7-18) D,C 4 144-13-40-2 B 144-13-40-1 A,B 4 144-13-41-11 B,C(2) 1 D 4 1 144-13-41-9 A 144-13-41-8 A 144-13-41-6 144-13-41-5 A 1 1 1 1 1 1 1 1 1 1 1 1					
D,C 4 144-13-40-2 B 4 144-13-40-1 A,B 4 144-13-41-11 B,C(2) 1 1 D 4 1 144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-6 ** 144-13-41-5 A 4					
144-13-40-2 B 4 144-13-40-1 A,B 4 144-13-41-11 B,C(2) 1 1 D 4 1 144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-6 ** 144-13-41-5 A 4		144-13-40-(7-18)			
144-13-40-1 A,B 4 144-13-41-11 B,C(2) 1 1 D 4 1 144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-6 ** 144-13-41-5 A 4					
144-13-41-11 B,C(2) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
D 4 1 144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-7 B,D 1 2 144-13-41-6 ** 144-13-41-5 A 4					
144-13-41-10 D 4 1 144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-7 B,D 1 2 144-13-41-6 ** 144-13-41-5 A 4		144-13-41-11			
144-13-41-9 A 4 1 144-13-41-8 A 4 1 144-13-41-7 B,D 1 2 144-13-41-6 ** 144-13-41-5 A 4		144-13-41-10			
144-13-41-8 A 4 1 144-13-41-7 B,D 1 2 144-13-41-6 ** 144-13-41-5 A 4					
144-13-41-7 B,D 1 2 144-13-41-6 ** 144-13-41-5 A 4					
144-13-41-6 ** 144-13-41-5 A 4					
144-13-41-5 A 4				1	2
				A	
177713777 M 4					
144-13-41-3 A 4					

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Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
418S (cont.)	144-13-41-(14-77)	B.C(1)	1	1
,	,	C(1)	3	<u></u>
		Ď΄	4	1
	144-13-41-(7-8)	B,C	1	1
	,	D	4	1
	144-13-41-(21-76)	B,C(2)	1	1
	144-13-41-4	B,C	1	1
		D	4	ī
	144-13-41-(9-20)	В	i	-
	, , ,	D	4	
419S	144-13-42-(9-20)	В	1	
	, ,	D	4	
	144-13-42-2	Α	4	
	144-13-42-1	. B	· 1	1
	•	C.D	4	1
	144-13-33-7	В	4	1
		D	1	1
	144-13-43-7	Α	4	
`	144-13-43-(28-45)	B,C	3	
		D	4	
	144-13-43-4	A	4	
	144-13-43-(8-27)	B,D	1	2
	144 42 42 2	C	4	2
	144-13-43-2 144-13-43-1	В	4	
	144-13-43-1 144-13-44-8	A	4	
	144-13-44-7	A A	4	
	144-13-44-6	A	4 4	
	144-13-44-5	A	4	
	144-13-44-4	A	4	
	144-13-44-3	Â	4	
	144-13-44-2	Ä	4	
	144-13-44-1	, ,	7	
	144-13-45-14	A(2)	4	
	144-13-45-(42-47)	B	4	
	(*under construction)	Č*	i	

STRUCTURAL INVENTORY CLASSES:

A = Habitable structures less than 5,000 square feet in area

B = Habitable structures greater than 5,000 square feet in area

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D = Parking lots

E = Ancillary buildings (gazebos, pool houses, garages, etc.)

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1 = seaward of baseline

3 = seaward of setback line

2 = seaward of dead zone

4 = within 50 ft of setback line

EROSION CONTROL INVENTORY:

1 = functional seawalls 2 = nonfunctional seawalls 4 = nonfunctional revetments

3 = functional revetments

5 = groins/jetties

Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
419S (cont.)	144-13-45-(70-97)	В	3	1
4130 (00)	111 10 13 (10 31)	C,D	1	1
	144-13-45-(15-29)	B,C	1	•
	144-13-45-9	**		
	144-13-45-8	**		
	144-13-45-7	Α	4	
	144-13-45-(30-41)	В	3	1
	144-13-45-4	**		
4 20S	144-13-45-7	Α	4	• *
	144-13-45-(30-41)	В	3	
	144-13-45-4	**		
	144-13-45-3	Α	4	
	144-13-45-2	D	3	
	144-13-45-(48-69)	В	4	1
	•	C	3	1
	144-14-10-12	A	4	
	144-14-10-11	A	4	
	144-14-10-10	A **	4	
`		*		
	144-14-10-9			
	144-14-10-8	B *	4	
	144-14-10-7	*		
	144-14-10-6	*		
	144-14-10-5		•	
	144-14-10-(14-28)	B *	3	
	144-14-10-3			
	144-14-10-2	A	4	
	144-14-10-1	A	4	
	144-14-05-22	A	4	
	144-14-05-21	B,D	4	1
	144-14-05-20	A	4	
	144-14-05-19	A	4	
	144-14-05-(78-89)	В	4	
	144-14-05-(96-107)	В	4	
	144-14-05-(72-77)	В	4	
	144-14-05-(108-116)	В	4	
	144-14-05-(90-95)	В	4	

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EROSION CONTROL INVENTORY:

1 = functional seawalls 2 = nonfunctional seawalls 4 = nonfunctional revetments

5 = groins/jetties

3 = functional revetments

Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
420S (cont.)	144-14-05-(117-159) 144-14-05-7	B,C	1	
	144-14-05-(8,23-33,35-71)	B C	4 1	
421 S	144-14-05-(8,23-33,35-71)	B C	4 1	
	144-14-05-3	Ē	3	
	144-14-05-2	B	4	. 1
	1.11 11 UU &	C	1	1
	144-14-05-1	В	4	1
	144-14-05-1	C.D	1	1
	144-14-04-(71-126)	В	4	1
	144-14-04-(9-62)	В	4	1
	144-14-04-(65-70)	В	4	1
	144-14-04-8	B,C,D	4	4
	144-14*04-0	E E	3	1
	144-14-20-(96,7)	C	3 4	1 1
	144-14-20-(90,7)	E	3	1
•	144-14-20-6	D	3 1	1
	144-14-20-5	**	*	1
	144-14-20-4	*		
	144-14-20-3	**		
	144-14-20-2	A,B	4	1
	177 17 20 2	D.C.E	3	1
	144-14-20-(9-93)	B	4	1
	11. 11. 20 (0.50)	č	1	1
	144-14-19-9	Ď	3	i
	144-14-19-8	В	4	•
		Ď	4	
	144-14-19-7	*	•	
	144-14-19-6	Α	3	1
422 S	144-14-19-8	В	4	
		D	4	
	144-14-19-7	*		
	144-14-19-6	Α	3	1
	144-14-19-(10-33)	В	3	1

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4 = within 50 ft of setback line

EROSION CONTROL INVENTORY:

1 = functional seawalls 2 = nonfunctional seawalls 4 = nonfunctional revetments 5 = groins/jetties

3 = functional revetments

144-14-19-2 144-14-19-34 144-14-19-1 144-11-14-41 144-11-14-40 144-11-14-(39,35) 144-11-14-34	A D,E B B B	4 3 3 3 1 3	
144-14-19-34 144-14-19-1 144-11-14-41 144-11-14-40 144-11-14-(39,35) 144-11-14-34	D D,E B B B	3 3 3 1	
144-11-14-41 144-11-14-40 144-11-14-(39,35) 144-11-14-34	D,E B B B	3 3 1	
144-11-14-40 144-11-14-(39.35) 144-11-14-34	B B B	3 1	
144-11-14-(39,35) 144-11-14-34	B B	1	
144-11-14-34	В		
		3	1
	D		1
		4	1
	С	1	1
144-11-14-33	E,B	4	1
	С	3	1
144-11-14-44	D	1	1
144-11-14-(135-176)	В	1	
144-11-14-(75-134)	В	1	
	C	4	
144-11-14-29	D	4	
144-11-14-28	C,D	4	
144-11-14-28	C,D	4	
144-11-14-(177-281)	С	4	
144-11-14-24	Α	4	
144-11-14-23	Α	4	
144-11-14-22	Α	4	
144-11-14-21	Α	4	
144-11-14-19	Α Α	4	
144-11-14-18	Α	4	
144-11-14-17	Α	4 .	
144-11-14-16	A	4	
144-11-14-14	*		
144-11-14-13	*		
144-11-14-12	*		
144-11-14-11	*		
144-11-14-9	* *		
144-11-14-8	A	4	
144-11-14-7	A,C	4	
144-11-14-6 144-11-14-4	A **	4	

STRUCTURAL INVENTORY CLASSES:

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1 = seaward of baseline 2 = seaward of dead zone 3 = seaward of setback line

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4 = within 50 ft of setback line4 = nonfunctional revetments

2 = nonfunctional seawalls

valls 5 = groins/jetties

3 = functional revetments

Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
423S (cont.)	144-11-14-3	Α	4	
	144-11-14-2	Α	4	
424 S	144-11-14-2	Α	4	
	144-12-01-17	**	•	
	144-12-01-18	**		
	144-12-01-19	**		
	144-12-01-20	**		
	144-12-01-21	**		
	144-12-01-22	**		
	144-12-01-23	**		
	144-12-01-24	**		
	144-12-01-13	Α	4	
	144-12-01-12 -	Α	4	
	144-12-01-11	**		
	144-12-01-9	Α	4	
	144-12-01-8	В	4	
	144-12-01-7	Α	4	
	144-12-01-6	' ^ ` A	4	
`	144-12-01-4			
	144-12-01-3			
	144-12-01-2	*		
	144-08-11-63	*		
	144-08-11-62	В	4	
	144-08-11-61	В	4	
425 S	144-08-11-61	В	4	
	144-08-11-59	В	4	
	144-08-11-58	В	4	
	144-08-11-57	B,C	4	
	144-08-11-55	A	4	
	144-08-11-54	Α	4	
	144-08-11-53	В	4	
	144-08-11-52	Α	4	
	144-08-11-(6-50)	B(2)	1	
		C	3	
	144-08-11-05	**		
	144-08-11-(66-110)	B(2).C	3	

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2 = nonfunctional seawalls

3 = functional revetments

5 = groins/jetties

Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
	144-08-11-(111-158)	В	3	1
	,	C(7)	1	- 1
425S (cont.)	144-08-11-2	B	ī	3
.200 (00)		Ď	4	3
	145-05-51-20	Ā	4	· ·
	145-05-51-19	Α	1	3
	145-05-51-18	A	1	3
426S	145-05-51-20	Α	4	
	145-05-51-19	Α	1	3
	145-05-51-18	Ä	1	3
	145-05-51-17	A	1	3
	145-05-51-16	Ä	1	3
	145-05-51-(79-87)	В	- 1	1,3
	= 12 22 22 (12.21)	Ď	4	1.3
	145-05-51-14	В	1	1,3
		D	4	1,3
	145-05-51-13	Ā	4	1,0
	145-05-51-12	B,C	1	1,4
•	145-05-51-11	D	1	1,4
	145-05-51-9	B,C,D,E(2)	ī	1,3
	145-05-51-8	D	1	1,5
	145-05-51-(23-78)	B.C.E	ī	1
	145-05-51-22	**	•	•
	145-05-51-3	Α	1	4
	145-05-51-2	D	i	7
	145-05-51-1	**	•	3
	145-05-46-1	B,C,D	1	1,3
	145-05-46-2	**	3	1
	145-05-46-3	Α	i	i
	145-05-46-4	Ä	1	1
	145-05-46-5	A	1	1,3
	145-05-46-6	Α	1	1.3
	145-05-46-7	В	1	1,3
	145-05-45-(30-121)	Α	1	1.3
	145-05-45-6			•
	145-05-45-7	Α	1	1,3
	145-05-45-(28-29)	A(2)	1	1,3

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EROSION CONTROL INVENTORY:

1 = functional seawalls

4 = nonfunctional revetments

2 = nonfunctional seawalls

3 = functional revetments

5 = groins/jetties

Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
	145-05-45-9	•	4	4.2
	145-05-45-10	A B	1 1	1,3
1266 (cont.)	145-05-45-11	A	1	1,3
426S (cont.)	145-05-45-11	A	1	1,3
		B B		
	145-05-45-13		1	
	145-05-45-29	Α	1	•
427S	145-05-45-9	Α	1	1,3
	145-05-45-10	В .	1	1,3
	145-05-45-11	Α	1	1,3
	145-05-45-12	Α	1	1,3
	145-05-45-13	В	1	1,3
	145-05-45-14	В	1	1,3
	145-05-45-16-	Α	1	
	145-05-45-122	Α	1	1,3
	145-05-45-17	Α	1	1,3
	145-05-45-18	Α	1	1.4
	145-05-45-19	Α	1	1,4
	145-05-45-20	Α	1	1.4
•	145-05-45-21	Α	1	1
	145-05-45-22	A	1	1,3
	145-05-45-23	Α	1	1,3
	145-05-45-24	Α	1	1,3
	145-05-45-(123-146)	B,C	1	1,3
	145-05-44-1	D	1	
	145-05-44-2	A	1	1,4
	145-05-44-3	Α	1	1.4
	145-05-44-4	Α	1	1,3
	145-05-44-5	Α	1	1,3
	145-05-44-6	Α	1	1,3
	145-05-44-7	Α	1	1,3
	145-05-44-8	В	1	1,3
	145-05- 44 -9	В	1	1,4
	145-05-44-10	Α	1	1,3
	145-05-44-11	В	1	1,3
	145-05-44-12	В	1	1,3
	145-05-44-13	Α	1	1,3
	145-05-44-14	Α	1	1,3

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EROSION CONTROL INVENTORY:

1 = functional seawalls

4 = nonfunctional revetments

2 = nonfunctional seawalls 3 = functional revetments

5 = groins/jetties

Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
	145-05-44-15	Α	1	
	145-05-44-16	Α	· 1	
27S (cont.)	145-05-44-17	Α	1	1
, ,	145-05-44-18	Α	1	1
	145-05-44-19	Α	1	1
	145-05-44-20	B,D	1	1
	145-06-11-(1-2)	B,C,D	1	1
	145-06-11-(3-4)	D,E,A	1	3
	145-06-11-Š	D	1	3
	145-06-12-1	B,C	1	3
	145-05-30-9	*		
	145-05-30-10	Α	4	
	145-05-30-11	*		
	145-05-30-12	*		
	145-05-31-7	В	4	
	145-05-31-8	**		
	145-05-31-9	*		
	145-05-31-10	**		
	145-05-36-7	*		
•	145-05-36-8	*		
	145-05-36-9	*		
	145-05-36-10	*		
	145-05-37-(62-79)	В	4	
	145-05-37-10	*		
	145-05-37-11	*		
	145-05-37-(92-95)	*		
	145-05-37-30	*		
	145-05-37-31	*		
	145-05-37-32	*		
	145-05-37-50	*		
	145-05-37-51	*		
	145-05-37-52	*		
	145-05-37-53	*		
	145-05-42-8 145-05-42-9	* *		

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1 = functional seawalls

4 = nonfunctional revetments

5 = groins/jetties

2 = nonfunctional seawalls

3 = functional revetments

Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
428 S	145-06-12-1	B,C	1	3
	145-06-12-2	Α	1	4
	145-06-12-3	Α	1	4
	145-06-12-4	Α	1	3
428S (cont.)	145-06-13-1	Α	1	
•	145-06-13-2	Α	1	
	145-06-13-3	Α	1	4
	145-06-13-4	Α	1	4
	145-06-13-5	Α	1	
	145-06-13-6	Α	1	
	145-06-14-1	Α	1	
	145-06-14-2	Α	1	
	145-06-14-3	Α	1	
	145-06-14-4	Α	1	
	145-06-14-5	Α	1	
	145-06-14-6	Α	3	
	145-06-15-1	Α	3	
	145-06-15-2	Α	3	
	145-06-15-3	i A	e™ 3	
`	145-06-15-4	Α	3	
	145-06-15-5	**		
	145-06-15-6	**		
	145-06-16-(8-67)	B,D	1	
	145-06-16-4	Α	1	
	145-06-16-5	Α	4	
	145-06-16-6	Α	4	
	145-02-06-(1-3)	**		
	145-02-06-4	Α	4	
	145-02-06-5	Α	4	
	145-02-06-6	Α	4	
	145-02-07-1	Α	4	
	145-02-07-2	Α	4	
	145-02-07-3	Α Α	4	
	145-02-07-4	Α	4	
	145-02-07-5	В	4	1
		C	3	1

STRUCTURAL INVENTORY CLASSES:

A = Habitable structures less than 5,000 square feet in area

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STRUCTURAL LOCATION CLASSES:

EROSION CONTROL INVENTORY:

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3 = seaward of setback line

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4 = within 50 ft of setback line

1 = functional seawalls 2 = nonfunctional seawalls

4 = nonfunctional revetments 5 = groins/jetties

3 = functional revetments

Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
429 S	145-02-07-1	A	4	
4233	145-02-07-2	Â	4	
	145-02-07-3	Â	4	
	145-02-07-4	Â	4	
429S (cont.)	145-02-07-5	B	4	1
4293 (COIII.)	145-02-07-5	C	3	1
	145-02-07-6	A	4	1
	145-02-11-1	A	4 4	
	145-02-11-2	A **	4	
	145-02-11-3	**		
	145-02-11-4	**		
	145-02-11-5	**		
	145-02-11-6			
	145-02-12-1	**		
	145-02-12-2	**		
	145-02-12-3	**		
	145-02-12-(4-21)	В	4	4
	145-02-17-1	, A	4	
	145-02-17-2	, A	3	
•	145-02-17-(9-17)	В	3	
	145-02-17-(4-6)	D	4	
	145-02-18-(19-27)	В	3	
	145-02-18-(7-18)	В	3	
	145-02-18-5	Α	4	
	145-02-18-6	Α	4	
	145-02-23-1	В	3	
	145-02-23-2	В	3	
	145-02-23-3	**		
	145-02-23-4	Α	4	
	145-02-23-5	Α	4	
	145-02-23-6	Α	4	
	145-03-01-(1-24)	B(2).C	3	
	145-03-01-(25-31)	В	1	
430S	145-03-01-(25-31)	В	1	
	145-03-01-32	Α	4	
	145-03-01-33	Α	4	
	145-03-01-34	Α	4	

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1 = seaward of baseline

3 = seaward of setback line

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4 = within 50 ft of setback line

EROSION CONTROL INVENTORY:

1 = functional seawalls 2 = nonfunctional seawalls 4 = nonfunctional revetments

5 = groins/jetties

3 = functional revetments

Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
	145-03-01-(193-207)	В	4	3
	145-03-01-(195-207)	B.C	1 1	3 3
	145-03-01-(50-01)	A A	4	3
	145-03-01-66	Ä	4	2
	145-03-01-67	Ä	3	2
430S (cont.)	145-03-01-68	Ä	1	1
1000 (00.11.)	145-03-01-69	Ā	4	,1
	145-03-01-70	Ä	4	1
	145-03-01-73	*	1	1
	145-03-01-(74-97)	В	î	1,3
	143 03 01 (14 31)	Č	4	1,3
	145-03-01-98	Ä	4	1,3
	145-03-01-99	Â	4	
	145-03-01-100	Â	4	. 1
	145-03-01-101	В	3	1
	145-03-01-102	Ā	3	1
	145-03-01-(189-192)	В	1	2
	145-03-01-104	B.C	ī	1
	/	D	4	1
•	145-03-01-105	В	3	•
	145-03-01-106	Ā	3	
	145-03-01-107	Ä	4	
	145-03-01-108	A	4	
	145-03-01-109	Α	4	
	145-03-01-110	В	4	
	145-03-01-111	В	4	
	145-03-01-112	Ā	4	
	145-03-01-113	Α	4	
431S	145-03-01-110	В	4	
	145-03-01-111	В	4	
	145-03-01-112	Α	4	
	145-03-01-113	A	4	
	145-03-01-(301-338)	В	3	1
	,	Ċ	1	ī
	145-03-01-(117-152)	В	3	ī
		C,D	1	ī
	145-03-01-153	*	- -	-

STRUCTURAL INVENTORY CLASSES:

A = Habitable structures less than 5,000 square feet in area

B = Habitable structures greater than 5,000 square feet in area

C = Recreational amenities (pools, piers, etc.)

D = Parking lots

E = Ancillary buildings (gazebos, pool houses, garages, etc.)

[Occurrence of more than one of any given structure is indicated by a number in parentheses following the letter.]

STRUCTURAL LOCATION CLASSES:

1 = seaward of baseline 2 = seaward of dead zone 3 = seaward of setback line 4 = within 50 ft of setback line

EROSION CONTROL INVENTORY:

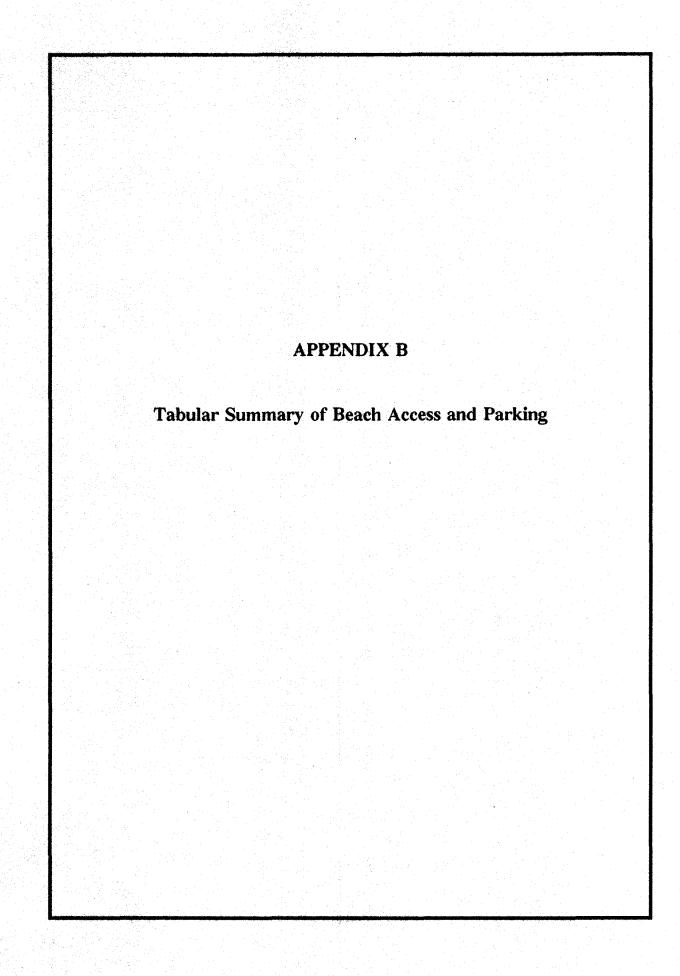
1 = functional seawalls

4 = nonfunctional revetments

2 = nonfunctional seawalls 3 = functional revetments

is 5 = groins/jetties

Map Overlay Number	Parcel Number	Structural Inventory	Structural Location	Erosion Control Inventory
	145-03-01-154	**		
	145-03-01-155	C.D	4	1
	145-03-01-158	A	Ā	2
	145-03-01-159	Ä	4	2
	145-03-01-160	Ä	4	-
431S (cont.)	145-03-01-(229-268)	B,C	3	2
4313 (conc.)	143-03-01-(223-200)	D,C D	4	2
	145-03-01-(269-300)	B,C	4	1
	145-03-01-(209-300)	*	7	•
	145-03-01-168	Α	4	
	145-03-01-169	Â	4	
	145-03-01-170	Ä	4	
	145-03-01-(208-227)	B	4	
	143-03-01-(200-227)	C,D	3	
	145-04-02-(74-182)	B(2),C,D	ĭ	4
	145-04-02-(14-102)	B.C	1	7
432S	145-04-02-(229-264)	В	1	1
	145-04-02-(184-224)	B,C	1	1
•	145-04-02-Ì83	*		
	145-04-02-(353-372)	В	4	
	,	D	3	
		С	1	
	145-04-02-19	В	3	
	145-04-02-(20-67)	. B(2)	1	1,3
	145-04-02- 6 8	A	1	3
	145-04-02-(65-124,212-241)	B(11)	1	3 3 3
		B,D	4	3



SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
412P	1	PA	1,4	75			
	2	PRP	1,4				
	3	PRP	1				
	4	PRP	1,4				
	5	PRP	1				
	6	PRP	1,4				
	Α				40	2	
	В				30	3	300
413P	1	PRP	1				
	2	PRP	1				
	3	PA	1	30			
	4	PRP	1				
	5	PRP	1				
	6	PA		4			
	7	PA	1,4	4			
	8	PRP	1				
	9	PRP	1				
	10	PA	1	4			
	11	PA	6	30			
	12	PRP	1				
	13	PRP	1				
	14	PRP	1,4				
	15	PA	1,7,8	75			
	16	PA		4			
	17	PA		30	25	2	
	A				27	3	700
	В				30	3	300
	C				40	3	240

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

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TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
414P	1	PRP	1				
2 3 4 5 6	2	PA	-	30			
	3	PA	1	4			
	4	PRP	1,4				
	5	PA	1	4			
	6	PRP	1 .				
	7	PA	1	4			
	8	PRP	1				
	9	PRP	1				
	10	PA	1	4			
	11	PRP	1,4				
	12	PA	6,7,8	75			
	13	PRP	1	,			
	14	PA	1	4			
	15	PA		4			
	16	PRP	1				
	17	PA	1	4			
	18	PA	4	4			
	Α				30	3	
	В				25	3	50

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

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TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
415P	1	PRP	1				
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2	PA	1	4			
	3	PA	1	4			
	4	PRP	1				
	5	PRP	1				
	6	PA	1	4			
7	PA	1,4	10				
		PRP	1				
416P	1 2 3 4	PA PRP PRP PA	1 4 1,5,6,7,8,9	10 60			
	5	PRP PRP	1,4				
	7	PRP					
	8	PA	1,5,6,7,8,9,10	50			
	9	PRP	1,0,0,1,0,7,1				
•	10	PRP					
	11	PA	1,7,8,9	50			
	12	PRP	, ,-,-	-			
	13	PRP					
	A			•	16	3	
	В				12	3	
	C		4		12	3	

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
417P	1	PRP	1				
	2	PRP	1				
	3	PRP	1				
	4	PRP	1,4				
5	PA	1,7,8,9	75				
		PRP	1				
	7	PA	1	5			
8	8	PRP	1				
	9	PA	1,4,7,8,9	30			
	10	PRP	1				
	11	PRP	1				
	12	PRP	1				
	13	PA	1	5			
	14	PRP	1				
	15	PA	1,7,8,9	30			
	16	PRP	1				
	17	PA	1,4	5			
	Α				12	3	
	В				7	3	
	С				12	3	
	D				42	3	30
	Ε				80	2	_

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
418P	1	PA	1,5,7,8,9,10	80			
5-	2	PA	1	10			
	3	PA	1	10			
	4	PA	1	10			
	.5	PA		10			
	6	PA.	1	10			
	7	PA		10			
	8	PA	1	10			
	9	PA	1	10			
	10	PA	1	10			
	11	PA	1,4,5,6,7,8,9	40			
	12	PA	1	10			
	13	PRP	1	10			
	14	PA	1	10			
	15	PA	1	10			
	16	PA	1	10			
	17	PA	1	10			
	18	PA	1	10			
	19	PA	4	10			
	20	PA	1	5			
	21	PRP	1				
	22	PRP	1				
	23	PRP	1				
	24	PA		10			
	25	PA		10			
	26	PA		10			
	27	PA		10			

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

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TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
418P (cont.)	A				26	3	_
1202 (001111)	В				6	3	
	С				80	2	_
	D				18	2	_
	E				12	2	
	F				25	2	
	G				12	2	
	H				10	1	770

419P	1	PRP		
	2	PRP		
	3	PA	1	31
	4	PRP	4	
	5	PA	1	10
	6	PA	1	5
	7	PA		5
	8	PRP	1	
	9	PA	1	5
	10	PRP	1	
	11	PRP	1	
	12	PA	1	10
	13	PA	1	10
	14	PA	1	5
	15	PA	1	5
	16	PA	1	5
	17	PA	4	5
	18	PA		5
	19	PA	-1	5
	20	PA	1	5
	21	PA		10

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
419P (cont.)	22	PA		10			
	23	PA		5			
	Α				16	2	
	В				18	2	
	C				12	2	
	D				12	1	420
420P	1	PA	1	5			
	2	PA	1	5			
	3	PA	1	5			
	4	PRP	1				
	5	PA	1,4	5			
	6	PA		5			
	7	PA	1	5			
	8	PA		5 5 5 5 5 5			
	9	PA	1	5			
	10	PA	1	5			
	11	PA					
	12	PA	1,5,6,7,8,9,10	50			
	13	PA	1	5			
	14	PA	1	5 5 5			
	15	PA	1,4	5			
	16	PA	1	5			
	17	PRP	1				
	18	PA		5			
	Α				12	3 2	
	В				26	2	_

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
421P	1	PRP	1				
	2	PA	1,5,6,7,8,9,10	70			
	3	PRP	1				
	4	PRP	1,4				
	5	PRP	1				
	6	PA	1	10			
	7	PA	1,7,8	50			
	8	PRP	1				
	9	PA	1,7,8	50			
	10	PA	1,7,8	50			
	Α				25	3	
	В				40	3	_
	С				25	3	_
	D				100	3	10
	E				30	3	_
	F				20	2	
	G				8	2	_
422P	1	PA	1,5,7,8	50			
	2	PRP	1	. 5			
	3	PA	1,2,3,4,7,8,9,10,11	65 50			
	4	PA	1,2,3,4,7,8,9,10,11	50			
	5	PA	1,5,6,7,8,9	100			
	6	PA	1,7,8,9	50			
	7	PRP	1,4	75			
	. 8	PA	1,7,8,9	75			
	9	PRP	1	25			
	10	PA	1,7,8,9	75	30	2	
	A				30 19	3 3	 150
	B C		4		19 25	2	130
	(:		4		25	2	

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
422P (cont.)	D				32	3	
(00111.)	Ē				35	3	-
	$\overline{\mathbf{F}}$				60	2	
	G				44	3	
	Н				32	3	-
	I				24	1	50-1,000
	J				20	1	50-1,000
	K				88	2	150
	L				100	3	100
423P	1 2	PA PRP	1,7,8,9 1	75			
	3	PRP	1,4				
	4	PA	1,7,8,9	70			
	5	PA	1,9	75			
	6	PA	1,9	75			
	7	PRP	•				
	8	PA	1,9	75			
	9	PA	1,9	7 5			
	10	PA	1,9	75			
	Α				32	3	
	В				88	2	350
	C				29	3	_
	D				20	3	
	E				20	3	_
	F				15	.3	-
	G				6	3	_
	H				20	3	

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
424P	1	PA	1,9	75			
	2	PA	1,4,9	75			
	3	PA	1,9	.75			
	4	PRP					
	5	PRP	1				
	6	PRP	. 1				
	7	PRP	1				
	8	PA	1,9	75			
	9	PA	1,9	75			
	10	PA	1,9	75			
	Α				10	3	
	В		4		17	3	_
	С				4*	3	_
	D				*	3	
	E				4*	3	-
	F				15*	3	-

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 =

5 = handicapped access ramp

9 = sign

2 = restrooms

15

16

PA

PA

6 = vehicle access ramp

10 = decks/seating

3 = showers

7 = trash receptacle available

11 = city park

4 = lifeguard station

8 = lighting

4 - Inchang station 0 - Infiling

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

[*Unimproved street ends provide minimum parking now but are a source of future improved parking as needed]

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
425P	1	PA	1,9	75		,	
	2	PA	1,9	7 5			
	3	PRP	1			**	
	4	PA	1,9	<i>7</i> 5			
	5	PRP	1				
	6	PRP	1				
	7	PA	6,9	30			
	8	PRP	1,4				
	9	PA	1,9	4			
	10	PA	1,9	4			
	11	PA	1,9	4			
	A		,		15	3	
	В				*	3	_
	С				20	3	
426P	1	PA	1,9	4			
	2	PA	1,9	4			
	3	PA	1,9	10			
	4	PA	1,9	4			
	5	PA	1,9	5			
	6	PA	1,9	5			
	7	PA	1,9	9			
	8	PA	1,5,6,9	66			
	9	PA	1,9	5			
	10	PA	1,9	4			
	11	PA	1,9	5			
	12	PA	1,9	5			
	13	PA	1,9	4			
	14	PA	1,9	5			
	1.5	D.4	1.0	-			

1,9

5

5

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

[*Unimproved street ends provide minimum parking now but are a source of future improved parking as needed]

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
426P (cont.)	17	PA		5			
	18	PA		4			
	19	PA		5			
	20	PA		4			
	21	PA		5 5			
	22	PA		5			
	23	PA		4			
	24	PA		5			
	25	PA		4			
	Α				24	2	*
	В				24	2 2 2	*
	С				15	2	*
	D				20	2	*
	E				21	3	*
	F				25	2	*
427P	1	PA	1,9	4			
	2	PA	1,9	5			
	3	PA	1,9	5			
	4	PA	1,9	4			
	5	PA		5			
	6	PA	1,9	5			
	7	PA	1,9	4			
	8	PA		5			
	9	PA	1,9	5			
	10	PA	1,9	4			
	11	PRP	1				
	12	PA	1,9	10			
	13	PA	1,9	4			
	14	PA		5			

5

15

PA

1,9

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

7

8

9

10

PA

PRP

PRP

PRP

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

[*Unimproved street ends provide minimum parking now but are a source of future improved parking as needed]

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
427P (cont.)	16	PA	1,9	5			
	17	PA	1,9	5			
	18	PA		4			
	19	PRP	1				
	20	PA	1,9	5			
	21	PRP	1				
	22	PA		5			
	23	PA	1,4,9	5			
	24	PA	1,9	5			
	25	PA	1,9	15			
	Α				100	2	_
	В				20	2	_
	С				12	2 2 2	_
	D		4		8 3 3 2 3		_
	E				3	1	70
	F				3	1	170
	G				2	1	50
	H					1	50
	I				4	1	260
428P	1	PA	1,9	15			
-1201	2	PA	1,9	5			
	3	PA	1,9	15			
	4	PRP	1	-			
	5	PRP	1				
	6	PA	1,9	5			

1,9

1

1

1

15

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
428P (cont.)	11	PA	1,9	5			
	12	PRP	1				
	13	PA	9	15			
	14	PRP	1				
	15	PRP	1				
	16	PRP	1				
	17	PA	1,9	5			
	18	PRP	1				
	19	PA	9	15			
	20	PRP	1,4				
	21	PA	1,9	5			
	22	PA	1,9	15			
	23	PA	1,9	. 5			
	24	PRP	1				
	25	PRP	1				
	26	PRP	1				
	27	PA	1,9	15			
	28	PRP	1				
	29	PRP	1				
	30	PRP	1				
	31	PRP	1				
	32	PRP	1				
	Α				80	2	_
	В				4	1	60
	C				2	1	265
	D				8	1	215
	E				3	1	75

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
429P	1	PRP	1		,		
	2	PA	1,9	15			
	3	PRP	1				
	4	PRP	1				
	5	PRP	1				
	. 6	PA	1,9	15			
	7	PRP	1				
	8	PA		5			
	9	PA	1	15			
	10	PA		5			
	11	PA	1,9	15			
	12	PRP	1				
	13	PA		5			
	14	PA	1,9	15			
	15	PRP	1				
	16	PRP	1				
	17	PA	1,9	5			
	18	PRP	1				
	19	PRP	1				
	20	PA	1,9	15			
	21	PRP	1				
	22	PA	1,9	5			
	23	PRP	1				
	24	PRP	1				
	25	PA	1,9	15			
	26	PA	1,9	5			
	27	PRP	1	-			
	28	PA	1,9	15			
	A		-,-		10	1	50
	В				4	1	270

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

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TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
430P	1	PA	1,9	5			
	2	PRP	1				
	3	PA	1,9	15			
	4	PRP	1				
	5	PRP	1				
	6	PA	1,9	5			
	7	PA	1,4,5,6,9	15			
	8	PA		5			
	9	PRP	1				
	10	PA		15			
	11	PRP	1				
	12	PA	1,9	5			
	13	PA	1,9	15			
	14	PA	1,9	5			
	15	PA	1,9	15			
	16	PRP	1				
	17	PRP	1				
	18	PA	1,9	5			
	19	PA	1,9	15			
	20	PRP	1				
	21	PA	1,9	5			
	22	PA	1,9	15			
	23	PA	1,9	5			
	Α				3	3	
	В				4	1	285
	С				4	1	60
	D				6	1	205
	E				4	1	65
	F				5	1	275
	G				1	1	190
	H				6	1	75

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
431P	1	PA	1,9	15			
		PA	1,9	5			
	2	PA	1,9	15			
	4	PA	•	5			
	5	PA	1,9	15			
	6	PA	1,9	5			
	7	PA	1,9	15			
	8	PRP	1				
	9	PA		5			
	10	PRP	1				
	11	PA	1,5,6,9	15			
	12	PA	1,9	5			
	13	PRP	1,4				
	14	PA	1,9	15			
	15	PA	1,9	5			
	16	PRP	1	5			
	17	PA	1,9	15			
	18	PRP	1,4				
	19	PA	1,9	5			
	Α				16	2	-
	В				48	2	_
	С				9	2	
	D				5 7	1	45
	E				7	1	45
	F				10	1	205

SITE: Numbers represent beach access sites. Letters represent parking sites.

TYPE OF ACCESS: PA = public access point PRP = private access point

FACILITY: 1 = walkover structure 5 = handicapped access ramp 9 = sign

2 = restrooms 6 = vehicle access ramp 10 = decks/seating 3 = showers 7 = trash receptacle available 11 = city park

4 = lifeguard station 8 = lighting

TYPE OF PARKING: 1 = on-street 2 = private off-street lots 3 = public off-street lots 4 = beach transit lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)

Map Overlay Number	Site	Type of Access	Facility	Width of Easement (if public) (ft)	Approximate Number of Parking Spaces	Type of Parking	Distance to Access Point (ft)
432P	1	PA	1,9	5			
1321	2	PA	1,7	15			
	3	PA		5			
	4	PRP	1	•			
	5	PA	1,9	15			
	6	PRP	1				
	7	PRP	1				
	8	PRP	1				
	9	PRP	1				
	10	PRP	1				
	11	PRP	1				
	12	PRP	1				
	13	PA	1	5			
	Α				10	2	
	В				4	1	40
	C				4	1	_

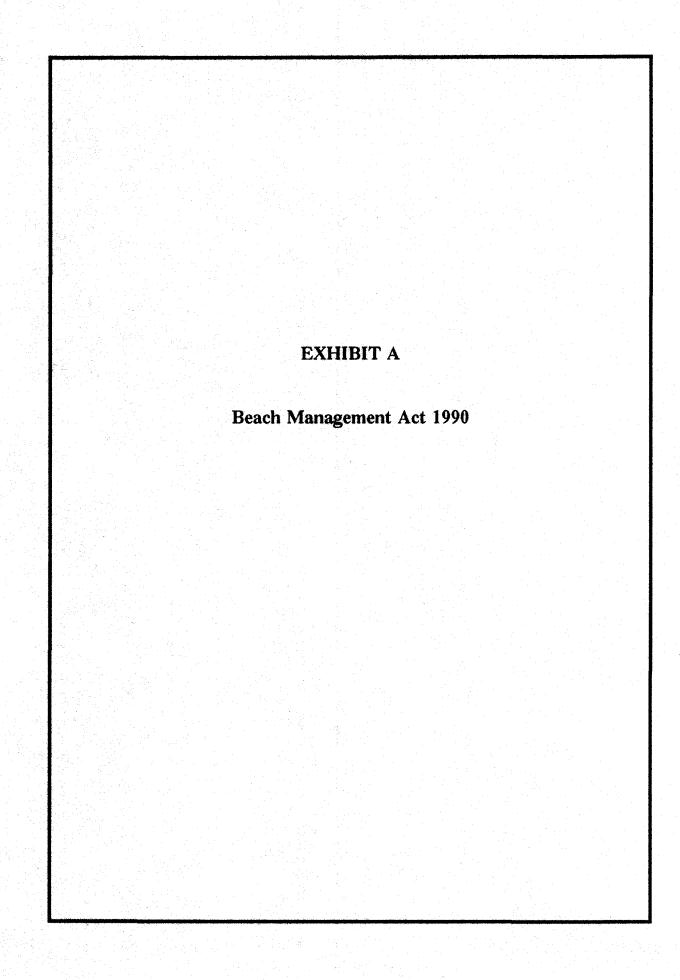


EXHIBIT A

Beach Management Act 1990

ADD REQUIREMENTS FOR THE BEACH MANAGEMENT PLAN AND OF A DISCLOSURE STATEMENT IN A CONTRACT OF SALE OR TRANSFER OF REAL PROPERTY, AND PROVIDE FOR THE CIRCUMSTANCES UNDER WHICH A PERMIT IS NOT THE THE SYSTEM; TO PROVIDE FOR THE OF SAND ON BEACHES; TO AMEND RELATING TO THE MEMBERS OF THEIR ELECTION INSTEAD OF APPOINTMENT AND APPOINTMENTS, TO PROVIDE FOR THE SERVICE OF THE CURRENT NONLEGISLATIVE MEMBERS OF THE THE REQUIRED AND FOR DOCUMENTATION; TO REPEAL THE COASTAL COUNCIL, SO AS TO PROVIDE FOR COUNCIL, AND TO PROVIDE FOR APPLICATION OF AS AMENDED, RELATING TO COASTAL COUNCIL PERMITS TO UTILIZE A CRITICAL AREA, SO AS TO WHEN A SECTIONS REVISE TE THE THE DUTIES OF THE COASTAL RECONSTRUCTION, HABITABLE STRUCTURES, EROSION CONTROL STRUCTURES OR DEVICES, POOLS, AND BUILDING PERMITS, AND THE EXEMPTIONS, PROVIDE FOR A PETITION TO THE CIRCUIT COURT BY LANDOWNERS AND THE SECTIONS 1 AND 2 OF ACT 634 OF 1988 RELATING SECTIONS 48-39-250 AN ACT TO AMEND THE CODE OF LAWS OF SOUTH BEACHIDUNE SYSTEM; TO AMEND SECTION 48-39-130 0. 0. 0. RELATING PROVIDE FOR AND TO FINDINGS AND POLICY RELATING TO AND COURT'S DETERMINATION, PROVIDE FOR REVISE PERMIT IS NOT NECESSARY; TO AMEND RELATING MO SO AS TO PROVIDE AND POLICY RELATING MANAGEMENT ACT, SO AS 48-39-355. THE PROVISIONS DETAILING THE BASELINE DEFINITIONS, THE PROVISIONS FOR VEGETATION, REQUIREMENTS PROVISIONS 1976, BY ADDING THROUGH 48-39-360, AND THE ACT ON LEGAL ACTIONS. DETERMINATION OF 48-39-305 O.F PLACEMENT OF SECTION 48-39-40, THE SETBACK LINE, CONSTRUCTION, AND 48-39-260 **BEACHIDOUNE** CAROLINA. FINDINGS PLANTING SECTIONS COUNCIL, CELETE BEACH RVISE 18-39-270

Be it enacted by the General Assembly of the State of South Carolina:

- (10) The is no coordinated state policy for post-storm emergency management of the beach/dune system,
- (11) A long-range comprehensive beach management plan is needed for the entire coast of South Carolina to protect and manage effectively the beach/dune system, thus preventing unwise development and minimizing man's adverse impact on the system.

Section 48-39-260. In recognition of its stewardship responsibilities, the policy of South Carolina is to:

- (1) protect, preserve, restore, and enhance the beach/dune system, the highest and best uses of which are declared to provide:
- (a) protection of life and property by acting as a buffer from high tides, storm surge, hurricanes, and normal erosion;
- (h) a source for the preservation of dry sand beaches which provide recreation and a major source of state and local business revenue;
 - (c) an environment which harbors natural beauty and enhances the well-being of the citizens of this State and its visitors;
- (d) natural habitat for indigenous flora and fauna including endangered species;
- (2) create a comprehensive, long-range beach management plan and require local comprehensive beach management plans for the protection, preservation, restoration, and enhancement of the beach/dune system. These plans must promote wise use of the state's beachfront to include a gradual retreat from the system over a forty-year period;
 - (3) severely restrict the use of hard erosion control devices to armor the beach/dune system and to encourage the replacement of hard erosion control devices with soft technologies as approved by the South Carolina Coastal Council which will provide for the protection of the shoreline without long-term adverse effects;
 - (4) encourage the use of erosion-inhibiting techniques which do not adversely impact the long-term well-being of the beach/dune system;

(6) promote carefully planned nourishment as a means of beach preservation and restoration where economically feasible;

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- (6) preserve existing public access and promote the enhancement of public access to assure full enjoyment of the beach by all our citizens including the handicapped and encourage the purchase of lands adjacent to the Atlantic Ocean to enhance public access;
- (7) involve local governments in long-range comprehensive planning and management of the beach/dune system in which they have a vested interest;
 - (8) establish procedures and guidelines for the emergency management of the beach/dune system following a significant storm event."

Beach/dune system policy

SECTION 2. Section 48-39-130(D)(1) and (6) of the 1976 Code, as last amended by Act 634 of 1988, are further amended to read:

"(1) The accomplishment of emergency orders of an appointed official of a county or municipality or of the State, acting to protect the public health and safety, upon notification to the council. However, with regard to the beach/dune critical area, only the use of sandbags, sandscraping, or renourishment, or a combination of them, in accordance with guidelines provided by the council is allowed pursuant to this item.

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(6) Emergency repairs to an existing bank, dike, fishing pier, or structure other than occanfront crosion control structures or devices which has been crected in accordance with federal and state laws or provided for by general law or acts passed by the General Assembly, if notice is given in writing to the council within seventy-two hours from the onset of the needed repairs."

Section 48-39-280. (A) A forty-year policy of retreat from the shoreline is established. The council must implement this policy and must utilize the best available scientific and historical data in the implementation. The council must establish a baseline which parallels the shoreline for each standard crosion zone and each inlet erosion zone.

(1) The baseline for each standard erosion zone is established at the location of the crest of the primary occanifront sand dune in that zone. In standard erosion zones in which the shoreline has been altered naturally or artificially by the construction of erosion control devices, groins, or other manmade alterations, the baseline must be established by the council using the best scientific and historical data, as where the crest of the primary occanifront sand dunes for that zone would be located if the shoreline had not been altered.

(2) The baseline for inlet erosion zones that are not stabilized by jetties, terminal groins, or other structures must be determined by the council as the most landward point of erosion at any time during the past forty years, unless the best available scientific and historical data of the inlet and adjacent beaches indicate that the shoreline is unlikely to return to its former position. In collecting and utilizing the best scientific and historical data available for the implementation of the retreat policy, the council, as part of the State Comprehensive Beach Management Plan provided for in this chapter, among other factors, must consider: historical inlet migration, inlet stability, channel bypassing on shorelines adjacent to the inlets, and the effects of nearby beach restoration projects on inlet sediment budgets.

(3) The baseline within inlet erosion zones that estabilized by jetties, terminal groins, or other structures must be determined in the same manner as provided for in item (1). However, the actual location of the crest of the primary occanfront sand dunes of that erosion zone is the baseline of that zone, not the location if the inlet had remained unstabilized.

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(4) Notwithstanding any other provision of this section, where a council-approved beach nourishment project has been completed, the local government or the landowners, with notice to the local government, may petition the council to move the baseline as far seaward as the landward edge of the erosion control structure or device or if there is no existing erosion control structure or device, then as far seaward as the post project baseline as determined by the council in accordance with Section 48-39-280(A)(1) by showing that the beach has been stabilized by council-approved beach nourishment.

If the petitioner is asking that the baseline be moved seaward pursuant to this section, he must show an ongoing commitment to renourishment which will stabilize and maintain the dry sand beach at all stages of the tide for the foresceable future.

If the council grants the petition to move the baseline seaward pursuant to this section, no new construction may occur in the area between the former baseline and the new baseline for three years after the initial beach nourishment project has been completed as determined by the council.

If the beach nourishment fails to stabilize the beach after a reasonable period of time, the council must move the baseline landward to the primary oceaniront sand dune as determined pursuant to items (1), (2), and (3) for that section of the beach.

(B) To implement the retreat policy provided for in subsection (A), a setback line must be established landward of the baseline a distance which is forty times the average

are be rebuilt and used for the same purposes if they constructed to the same dimensions;

- golf courses:
- normal landscaping;
- structures specifically permitted by special permit as provided in subsection (D);
 - (7) pools may be reconstructed if they are landward A permit must be obtained from the council for items of an existing, functional crosion control structure or device.

(B) Construction, reconstruction, or alterations between (2) through (7).

(a) New habitable structures: If part of a new habitable structure is constructed seaward of the setback line, the owner must certify in writing to the council that the baseline and the setback line are governed as follows: the construction meets the following requirements: (1) Habitable structures:

five thousand square feet of heated space. The structure must be located as far landward on the property as to property lines and setback lines which may be in (i) The habitable structure is no larger than cross section of the structure, and the structure's relation No erosion control structure or device may be incorporated as an integral part of a habitable structure practicable. A drawing must be submitted to the council showing a footprint of the structure on the property, a constructed pursuant to this section, effect.

on the primary oceanfront sand dune or seaward of the (ii) No part of the building is being constructed baseline.

effective date of Act 634 of 1988 or constructed pursuant which existed (b) Habitable structures to this section:

(i) Normal maintenance and repair of habitable structures is allowed without notice to the council.

if the additions together with the existing structure do not (ii) Additions to habitable structures are allowed of, beated ن ق five thousand square oxered

with the forth in Additions to habitable structures must comply as set new habitable structures jo subitem (a) conditions

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to natural (iii) Repair or renovation of habitable damaged, but not destroyed beyond repair, due or manmade causes is allowed.

structures is allowed after notification is provided by the owner to the council destroyed beyond repair due to natural causes habitable that all of the following requirements are met: ō Replacement (<u>i</u>.

seaward of the setback line. The linear footage of the replaced structure parallel to the coast does not exceed the exceed the total square footage of the original structure eplaced structure scaward of the setback line does not square footage original linear footage parallel to the coast. The total

The replaced structure is no farther seaward than the original structure.

Where possible, the replaced structure is moved landward of the setback line or if not possible, then as far landward as is practicable, considering local

seaward of Sections zoning and parking regulations.
d. The reconstruction is not permitted elsewhere 48-39-250 through 48-39-360. the baseline unless

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structures destroyed beyond repair due to manmade causes is allowed structure must not is constructed as the rebuilt structure is no larger Replacement of habitable farther seaward than the original structure. landward as possible, but the new original structure it replaces and 3 provided

Brosion control devices:

a public highway which existed on the effective date of No new erosion control structures or are allowed seaward of the setback line except to

23

include the as practical. It is moved as far landward determination of practicality must consideration of local zoning requirements.

(ii) It is rebuilt no larger than the destroyed pool.

(iii) It is constructed according to acceptable standards of pool construction and cannot be reinforced in a manner so as to act as an erosion control structure or device.

(d) If a pool is not destroyed beyond repair as determined by the council pursuant to Section 48-39-270(11) but the owner wishes to replace it, the owner may do so

(i) The dimensions of the pool are not enlarged.

(ii) The construction conforms to sub-subitem (iii) of subitem (c).

(4) All other construction or alteration between the accomplishment of the goals and purposes of Sections the general permits would advance the implementation and baseline and the setback line requires a council permit. However, the council, in its discretion, may issue general permits for construction or alterations where issuance of 48-39-250 through 48-39-360.

construction, a person, partnership, or corporation owning real property that is affected by the setback line as established in Section 48-39-280 may proceed with with the partnership, or corporation may proceed with the construction of buildings and other elements of a master notwithstanding the setback line established in this chapter if the person, partnership, or corporation legally has begun (C) (1) Notwithstanding the provisions relating to new construction pursuant to a valid building permit issued as The person, plan, planned development, or planned unit development a use as evidenced by at least one of the following: of the effective date of this section.

ö (a) All building permits have been applied issued by a local government before July 1, 1988.

There is a master plan, planned development, or planned unit development:

(i) that has been approved in writing by a local

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(ii) where work has begun pursuant to approval government before July 1, 1988; or

of the utility and real property that is subject to the setback line and included in the approved master plan, planned development, or to service the as evidenced by the completion designed infrastructure installation planned unit development.

(3) Nothing in this section prohibits the construction guidelines for repairs as set forth in this section.

However, repairs performed on a habitable

structure built pursuant to this section are subject to the

of fishing piers or structures which enhance beach access seaward of the baseline, if permitted by the council.

(D) Special permits:

beach erodes to the extent the permitted structure becomes situated on the active beach, the permittee agrees the oceanfront sand dune or on the active beach, and if the rebuild a structure other than an erosion control structure or device seaward of the baseline that is not allowed structure is not constructed or reconstructed on a primary determination of the council, must not be detrimental to (1) If an applicant requests a permit to build or otherwise pursuant to Sections 48-39-250 through 48-39-360, the council may issue a special permit to the applicant to remove the structure from the active beach if council orders the removal. However, the use of property authorized under this provision, in the construction or reconstruction the public health, safety, or welfare. authorizing

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committee to consider applications for special permits. Permitting Committee (2) 'The council's

impose reasonable additional conditions and safeguards as (3) In granting a special permit, the committee may

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it and is an unreasonable exercise of police power and constitutes a taking without compensation. The burden of proof is on the petitioner as to ownership, and the burden of proof is on the State to prove that the prohibition is not an unreasonable exercise of police power.

determination of the issue of whether the prohibition constitutes a taking without compensation is the exclusive judicial determination of the issue, and it must not be determined in another judicial proceeding. The court shall enter a judgment in accordance with the issues. If the judgment is in favor of the petitioner, the order must require the State either to issue the necessary permits for construction or reconstruction of a structure, order that the prohibition does not apply to the property, or provide reasonable compensation for the loss of the use of the land or the payment of costs and reasonable attorney's feces, or both. Fither party may appeal the court's decision.

Section 48-39-310. The destruction of beach or dune vegetation scaward of the setback line is prohibited unless there is no feasible alternative. When there is destruction of vegetation permitted seaward of the setback line, mitigation, in the form of planting of new vegetation where possible, for the destruction is required as part of the permit conditions.

Section 48-39-320. (A) The council's responsibilities include the creation of a long-range and comprehensive beach management plan for the Atlantic Ocean shoreline in South Carolina. The plan must include all of the following:

(1) development of the data base for the state's coastal areas to provide essential information necessary to make informed and scientifically based decisions concerning the maintenance or enhancement of the beach/dune system;

- (2) development of guidelines and their coordination with appropriate agencies and local governments for the accomplishment of:
- (a) beach/dune restoration and nourishment, including the projected impact on coastal erosion rates, cost/benefit of the project, impact on flora and fauna, and funding alternatives;
- (b) development of a beach access program to preserve the existing public access and enhance public access to assure full enjoyment of the beach by all residents of this State:
- (c) maintenance of a dry sand and ecologically stable beach;
- (d) protection of all sand dunes seaward of the setback line;
 - (e) protection of endangered species, threatened species, and important habitats such as nesting grounds;
- (f) regulation of vehicular traffic upon the beaches and the beach/dune system which includes the prohibition of vehicles upon public beaches for nonessential uses;
- (g) development of a mitigation policy for construction allowed scaward of the setback line, which must include public access ways, nourishment, vegetation, and other appropriate means;
- (3) formulation of recommendations for funding programs which may achieve the goals set forth in the State Comprehensive Beach Management Plan;
 - and awareness of the importance of the beach/dune system, the project to be coordinated with the South Carolina Educational Television Network and Department of Parks, Recreation and Tourism;
- (5) assistance to local governments in developing the local comprehensive beach management plans.
- (B) The plan provided for in this section is to be used for planning purposes only and must not be used by the council to exercise regulatory authority not otherwise

local government. If a local government fails to establish and enforce a local coastal beach management plan, the government automatically loses its eligibility to receive available state-generated or shared revenues designated for beach/dune system protection, preservation, restoration, or enhancement, except as directly applied by the council in its administrative capacities.

Section 48-39-355. A permit is not required for an activity specifically authorized in this chapter. However, the council may require documentation before the activity begins from a person wishing to undertake an authorized construction or reconstruction activity. The documentation must provide that the construction or reconstruction is in compliance with the terms of the exemptions or exceptions provided in Sections 48-39-280 through 48-39-360.

Section 48-39-360. The provisions of Sections 48-39-250 through 48-39-365 do not apply to an area which is at least one-half mile inland from the mouth of an inlet."

Beach Management Act revised

SECTION 4. Sections 1 and 2 of Act 634 of 1988 are repealed.

Placement of sand on beaches

for maintaining navigation inlets to promote recognizes commercial and recreational uses of our coastal waters and The General Assembly further recognizes that inlets alter the natural drift of beach-quality sand resources, which often results in these sand resources being around shallow outer-bar areas instead of downdrift beaches. Therefore, it is the intent of the General Assembly that: The General Assembly hereby natural nourishment to the their resources. deposited SECTION the need providing

(1) All construction and maintenance dredgings of beach-quality sand be placed on the downdrift beaches; or, if placed elsewhere, an equivalent quality and quantity of sand from an alternate location be placed on the downdrift beaches at no cost to the State and at a location acceptable to the South Carolina Coastal Council.

(2) On an average annual basis, a quantity of sand be placed on the downdrift beaches equal to the natural net annual longshore sediment transport, at no cost to the State. The placement location and quantities based on natural net annual longshore transport be established by the Council, and the sand quality be acceptable to the Council.

(3) The Council may promulgate regulations necessary to implement the provisions of this section."

Election of Coastal Council members

SECTION 6. Section 48-39-40 of the 1976 Code is amended to read:

have one vote; six members, one from each of the congressional districts of the State, to be elected by a majority vote of the members of the House of officio: two state senators, one to be appointed by the President of the Senate and one to be elected by the Senate Fish, Game and Forestry Committee; and two coastal zone county, each House or Senate member to Representatives and the Senate representing the counties in that district, each House or Senate member to have one consists of eighteen sone county, to be elected by a majority vote of the members of the House of Representatives and a majority vote of the Senate members representing the county from three nominees submitted by the governing body of each vote; and the following legislative members who serve ex members as follows: eight members, one from each coastal nombers of the House of Representatives to be appointed is created the Carolina Coastal Council which 48-39-40. (A) There "Section

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EXHIBIT B-1

Calculation of SCCC Jurisdictional Baselines and Setback Lines

CALCULATION OF SOUTH CAROLINA COASTAL COUNCIL JURISDICTIONAL BASELINES AND SETBACK LINES

NORTH MYRTLE BEACH

MAY 1990

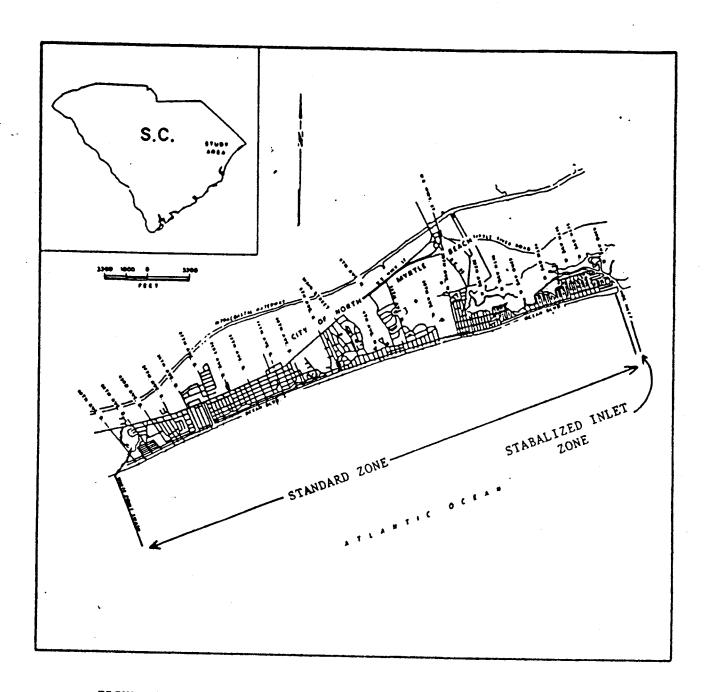


FIGURE 1. North Myrtle Beach Zone Designations.

Table 1 is essentially the worksheet used to determine the location of the beach lines at each monument in North Myrtle Beach. Please note that the negative values indicate landward directions. The following explains the information to be found in each column.

Column 1 - Location of surveyed beach profile by monument number.

Column 2 - Indication of type of beach zone.

S - Standard zone

IS - Stabilized inlet zone

IU - Unstabilized inlet zone

Column 3 - Distance from the survey monument to the +10 foot contour. If no +10 contour exists on the profile, a zero value is assigned unless otherwise indicated.

Column 4 - Calculated sand volume at the monument between the +10 and -5 foot contour unless indicated otherwise.

Column 5.- The smoothed volume of sand as calculated by using a five-point averaging program to smooth the data.

Column 6 - The calculated ideal volume between the chosen contours, usually the +10 and -5 foot.

Column 7 - The difference between columns 5 and 6. A volume surplus indicates the actual volume at that monument is greater than the ideal. A volume deficit indicates the ideal volume is greater than the actual.

Column 8 - This data is taken from the deficit-offset curve. The value indicates the horizontal distance from the +10 contour necessary to attain the volume deficit listed in column 7. A volume surplus in column 7 would necessitate a value of zero in column 8.

Column 9 - This value is the horizontal distance on the ideal dune profile between the dune crest and the +10 contour unless indicated otherwise.

Column 10 - The location of the baseline, as calculated using the ideal dune methodology, as determined by summation of columns 3, 8, and 9. The survey monument is the reference for horizontal measurements.

Therefore, positive distances are seaward of the monument and negative distances are landward of the monument.

Column 11 - Location of the actual dune crest as determined from the survey data and referenced to the monument. A value of zero is assigned if the highest elevation on the profile is located at the monument.

Column 12 - Location of the baseline as determined by using the lesser value in columns 10 and 11. This insures the baseline is not located seaward of an existing dune.

Column 13 - Location of the no-construction line as determined by subtracting 20 feet from column 12.

Column 14 - Shoreline change rate, in feet per year, as determined by the SCCC.

Column 15 - Location of the forty year setback line as calculated by subtracting from the value in column 12 (baseline location) forty times the value in column 14 (shoreline change rate) if the change rate is negative. Otherwise, the no construction line is the same as the forty year setback line.

From the information presented in Table 1, the location of the beach lines at each monument was placed on SCCC orthophoto maps. These orthophoto maps are of such quality as to allow the values calculated in columns 12,13, and 15 to scaled from the survey monuments which have been located on the maps. A straight line was drawn between the line locations at each monument. If, upon review of stereoscopic pairs of the July 2, 1988, SCCC aerial photography, it was determined the baseline was seaward of the existing dune ridge, the line was adjusted accordingly.

The definition of shoreline position, as used by the staff, is the point at which vegetation and relief are evidenced from the review of the stereoscopic pairs. 1:6000 scale enlargements were made of specific photograph frames so that errors associated with using high altitude photography could be reduced. After the stereoscopic pairs were studied, the shoreline was marked on the associated photo enlargement. The enlargements were then all referenced to the 1988 orthophoto maps. Then the referenced shoreline was digitized using a Numonics digitizer and ARC/INFO software, in conjunction with a Compaq computer. Overlays to the 1:1200 scale SCCC orthophoto maps were generated via a Hewlett Packard Draftpro plotter. These overlays are essentially shoreline change maps depicting the information taken from the historical photographs. In North Myrtle Beach, the 1949 and 1988 shorelines were interpreted and used to calculate the average erosion rate (-0.4 ft/yr).

MAPS

The baseline, 20-foot no-construction line and 40-year setback line are delineated on South Carolina Coastal Council Beachfront Orthophoto Maps. These maps are at a 1:1200 scale and are to National Map Accuracy Standards. Ninety percent (90%) of all planimetric features are plotted so that their positions on the finished map are accurate to within one fortieth (1/40th) of an inch (2.5 feet) of their true coordinate positions; and none of the features are displaced on the finished maps by more than one twentieth (1/20th) of an inch (5 feet) from their true coordinate positions. The grid ticks are accurate to within one one-hundredth of an inch (1 foot) of their true coordinate positions. The State Plane Coordinate System (NAD 1983) is used to reference the positions of the images and jurisdictional lines and grid ticks appear on the maps located

REFERENCES AND RELATED PAPERS

- W.C. Eiser, et al., 1989. Analysis of beach survey data along South Carolina's coast, pp.4-8, 57-60.
- C.P. Jones, et al., 1988. Calculation of interim baselines and 40-year setback lines, pp.3-8.
- T.W. Kana, 1990. Beach profiles at Hog Inlet, pp.4.
- W. Edge, 1990. Beach profiles near White Point Swash, pp.4.
- U.S. Coast Guard and Geodetic Survey, Hydrographic Survey No. H9229.

The following aerial photographs were used:

ASCS 1948 (ASO-4D-77)-(ASO-11D-49)

1952 (ASO-6K-40)-(ASO-5K-23)

1958 (ASO-1R-86)-(ASO-1R-21)

1962 (ASO-4DD-155)-(ASO-6DD-72)

1972 (5401-173-28)-(45051-173-11)

SCCC Benatec Orthophotos 412-432

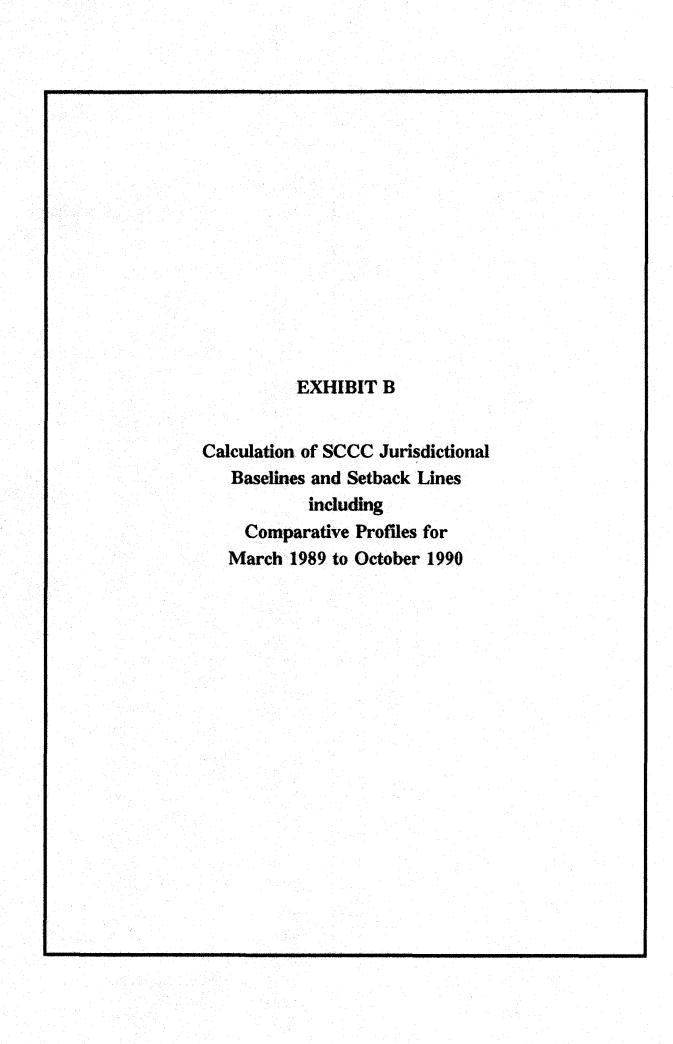
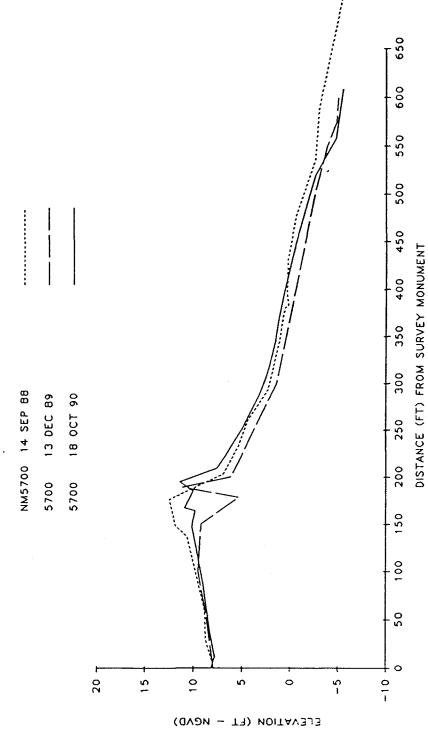


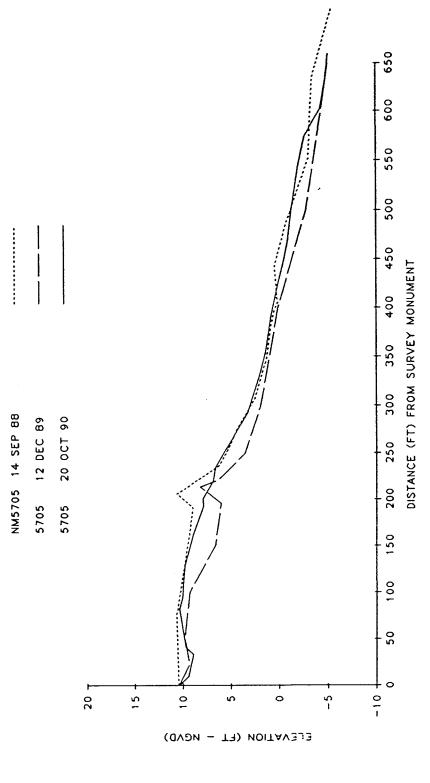
EXHIBIT B-2

Comparative Profiles (March 1989 to October 1990)

SOUTHEAST CORNER OF INTERSECTION OF 47TH AVE N AND OCEAN BLVD

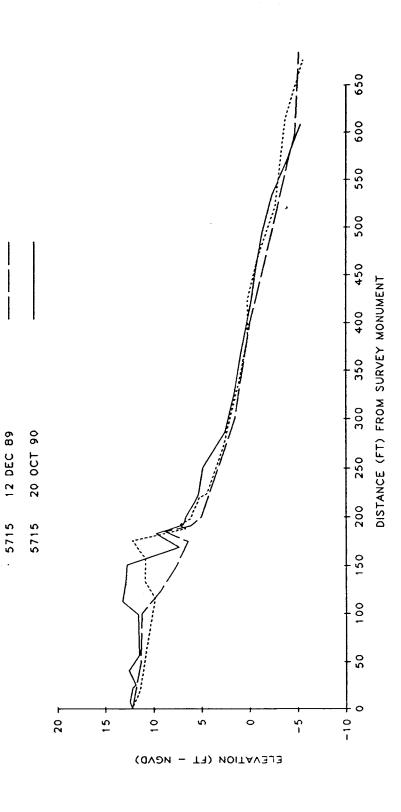


WEST SIDE OF OCEAN BLVD, 215 FT S OF 45TH AVE S, N OF WINDY VILLAGE



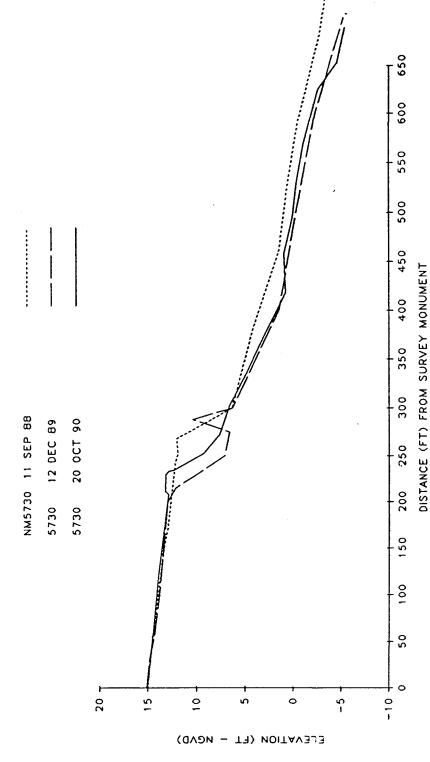
S OF OCEAN PIER CONDO OF 39TH AVE S, S EAST SIDE OF OCEAN BLVD 197 FT

NM5715 14 SEP 88



WEST SIDE OF OCEAN BLVD 146 FT N OF 34TH AVE S AT CEDAR RIDGE I CONDO DISTANCE (FT) FROM SURVEY MONUMENT NM5720 11 SEP 88 12 DEC 89 20 OCT 90 20 T 10+ ELEVATION (FT - NGVD)

NORTHWEST CORNER OF INTERSECTION OF 27TH AVE S AND OCEAN BLVD

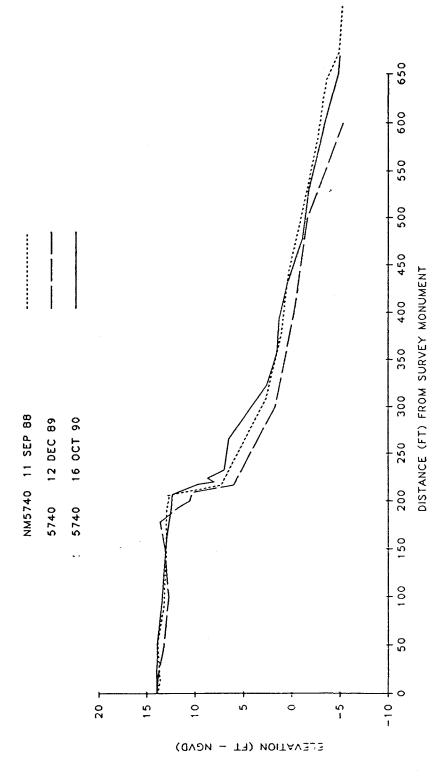


NORTHWEST CORNER OF INTERSECTION OF 23RD AVE S AND OCEAN BLVD 12 DEC 89 16 OCT 90 20 T -10+

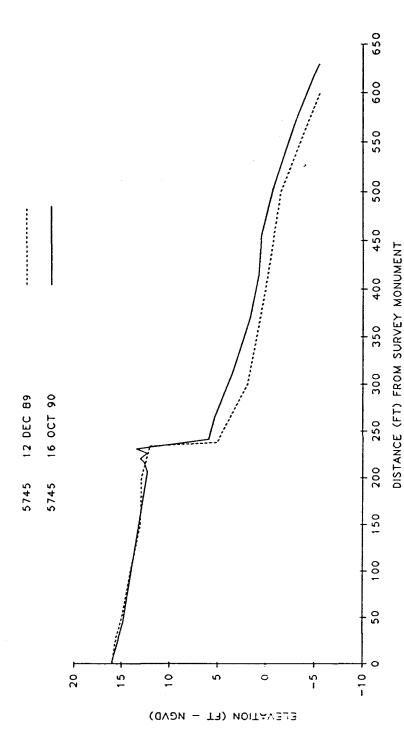
ELEVATION (FT - NGVD)

DISTANCE (FT) FROM SURVEY MONUMENT

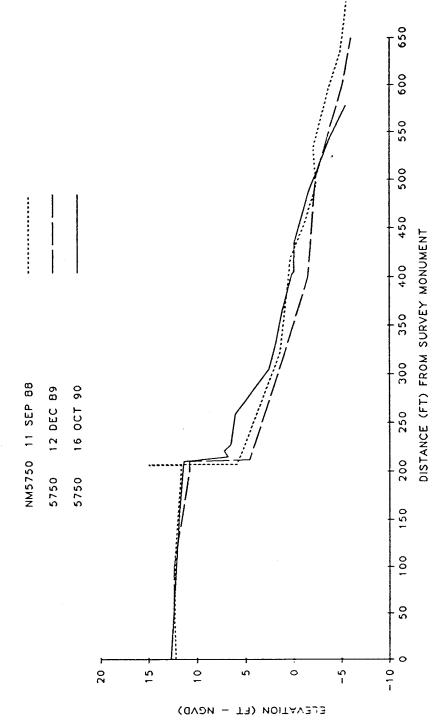
OF OCEAN BLVD IN FRONT OF 2006 S OCEAN BLVD AT BEACH ACCESS WEST SIDE



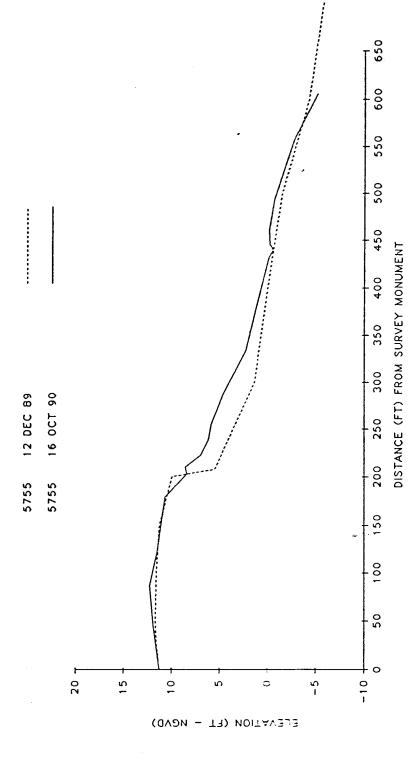
SOUTHWEST CORNER OF INTERSECTION OF 18TH AVE S AND OCEAN BLVD



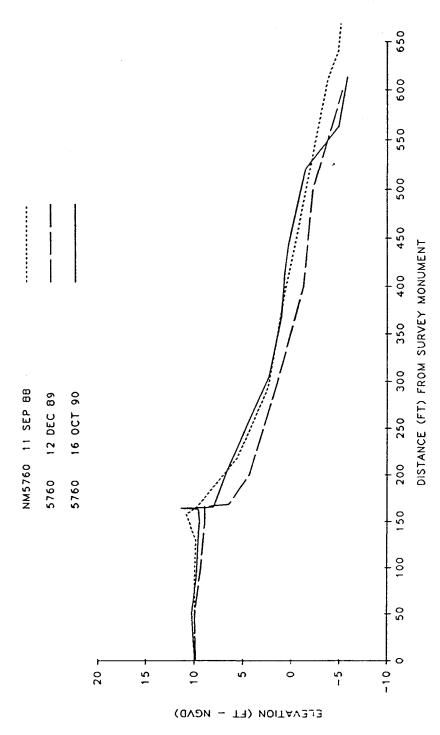
WEST SIDE OF OCEAN BLVD BETWEEN 1616 AND 1618 S OCEAN BLVD



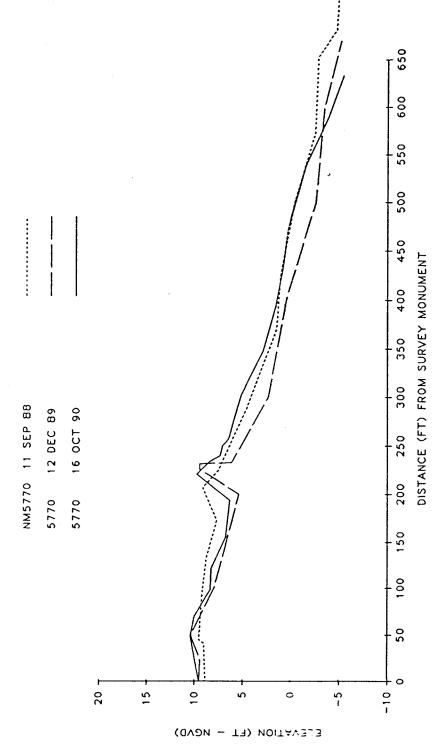
SOUTHWEST CORNER OF INTERSECTION OF 15TH AVE S AND OCEAN BLVD



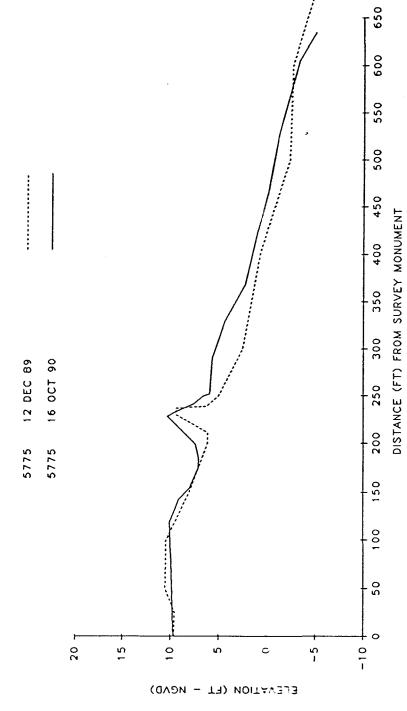
SOUTHEAST CORNER OF INTERSECTION OF 14TH AVE S AND OCEAN BLVD



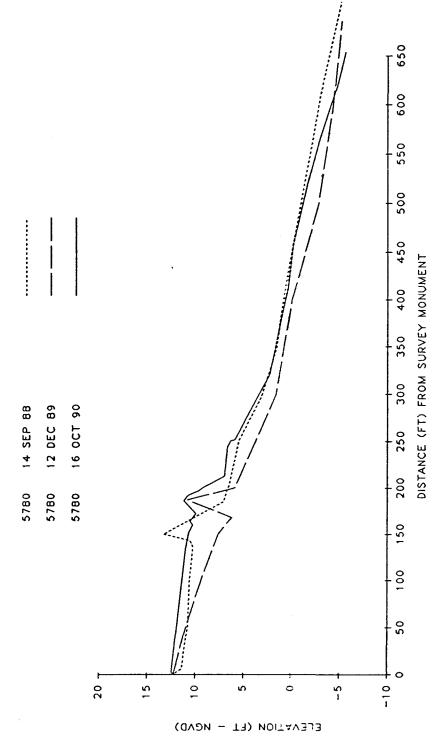
WEST SIDE OF OCEAN BLVD BETWEEN 1100 AND 1102 S OCEAN BLVD



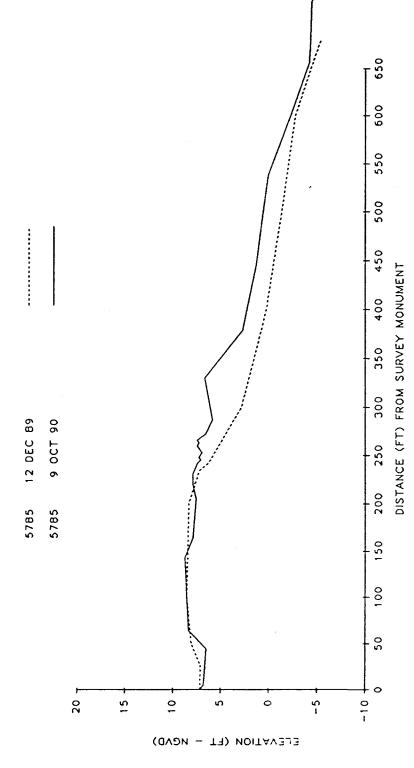
WEST SIDE OF OCEAN BLVD 121 FT S OF 10TH AVE S



SOUTHEAST CORNER OF INTERSECTION OF 9TH AVE S AND OCEAN BLVD



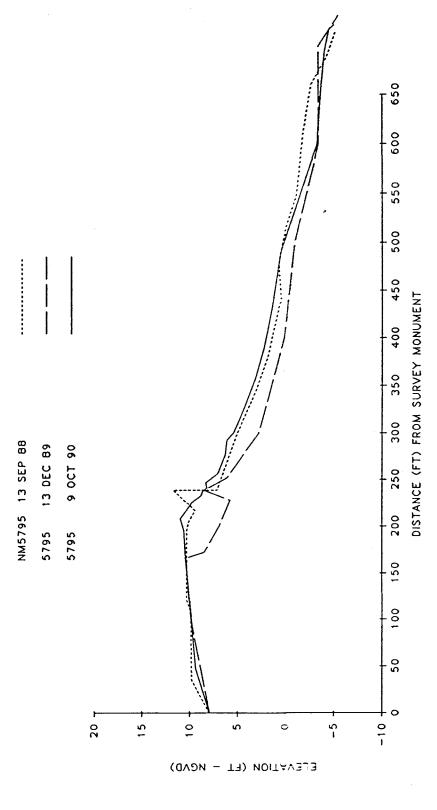
NORTHEAST CORNER OF INTERSECTION OF 7TH AVE S AND OCEAN BLVD



DISTANCE (FT) FROM SURVEY MONUMENT NM5790 14 SEP 88 12 DEC 89 9 OCT 90 WEST SIDE 101-S ELEVATION (FT - NGVD)

OF OCEAN BLVD SOUTH OF 5TH AVE S AND NORTH OF SEA VIEW APTS

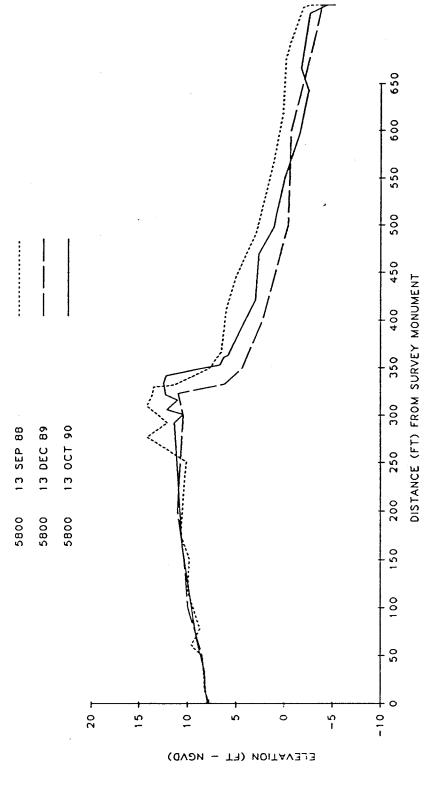
SOUTHEAST CORNER OF INTERSECTION OF 2ND AVE S AND OCEAN BLVD



400 450 DISTANCE (FT) FROM SURVEY MONUMENT 13 DEC 89 9 OCT 90 + 01-20 T ELEVATION (FT - NGVD)

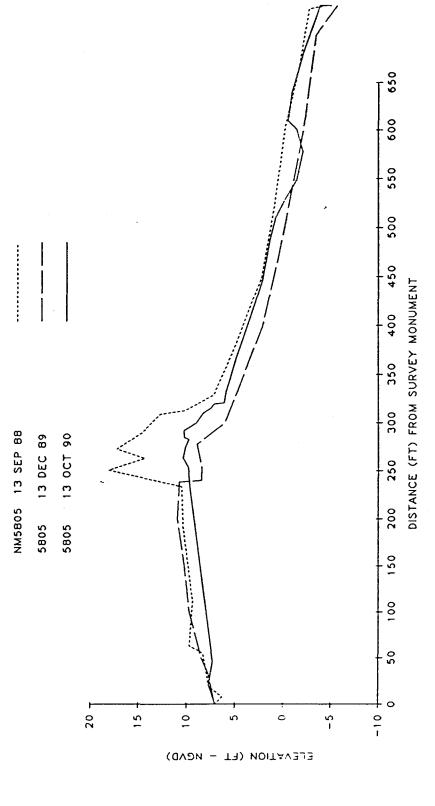
SOUTHEAST CORNER OF INTERSECTION OF 1ST AVE N AND OCEAN BLVD

IN MEDIAN OF OCEAN BLVD SOUTH OF 3RD AVE N



650 009 550 IN MEDIAN OF OCEAN BLVD N OF 5TH AVE N 200 400 450 DISTANCE (FT) FROM SURVEY MONUMENT 350 300 13 DEC 89 13 OCT 90 200 250 5803 5803 150 100 20 20 7 + 01-0 15 9 S 0 ELEVATION (FT - NGVD)

IN MEDIAN OF OCEAN BLVD NORTH OF 7TH AVE N

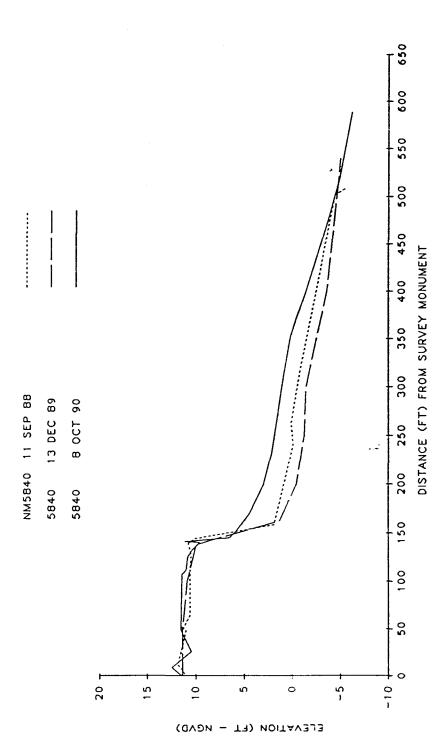


IN MEDIAN OF OCEAN BLVD N OF 14TH AVE S DISTANCE (FT) FROM SURVEY MONUMENT 13 DEC 89 8 OCT 90 20 T -10+ -5 S ELEVATION (FT - NGVD)

NORTHWEST CORNER OF INTERSECTION OF 17TH AVE N AND OCEAN BLVD DISTANCE (FT) FROM SURVEY MONUMENT NM5820 13 SEP 88 13 OCT 90 13 DEC 89 20 T + 01-ELEVATION (FT - NGVD)

S, S OF CABANA TERRACE DISTANCE (FT) FROM SURVEY MONUMENT OF 18TH AVE IN MEDIAN OF OCEAN BLVD 650 FT N 13 DEC 89 8 OCT 90 20 T 10 + -5 ELEVATION (FT - NGVD)

IORTH MYRTLE BEACH NE CORNER OF INTERSECTION OF OCEAN BLVD AND 26TH AVE I

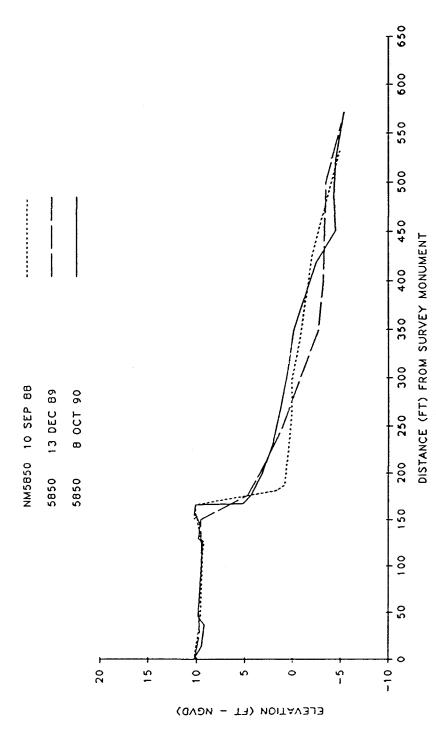


650 SOUTH OF BEACH ACCESS AT 30TH AVE N AND OCEAN BLVD 900 550 200 350 400 450 200 250 300 8 OCT 90 5 JAN 90 58458 5845B 150 100 20 20 T 10 -10+ 15 5 0

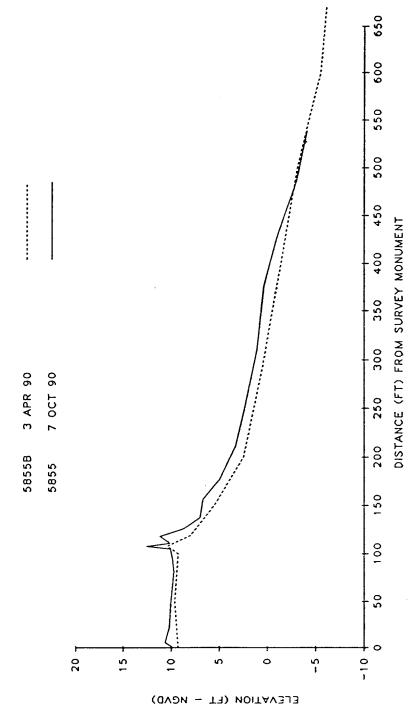
ELEVATION (FT - NGVD)

DISTANCE (FT) FROM SURVEY MONUMENT

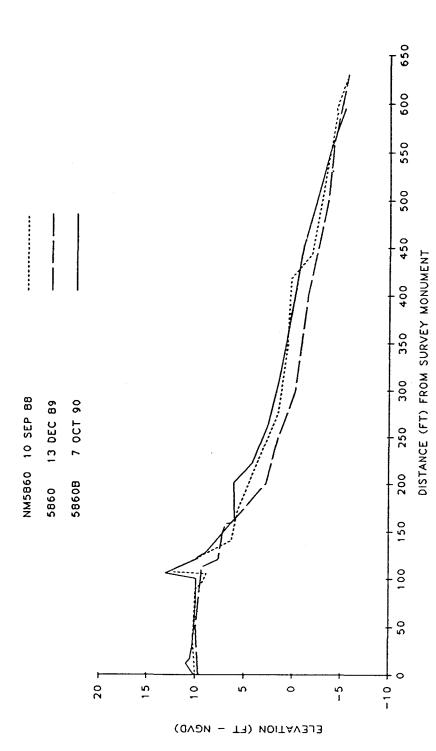
NORTHWEST CORNER OF INTERSECTION OF 32ND AVE N AND OCEAN BLVD



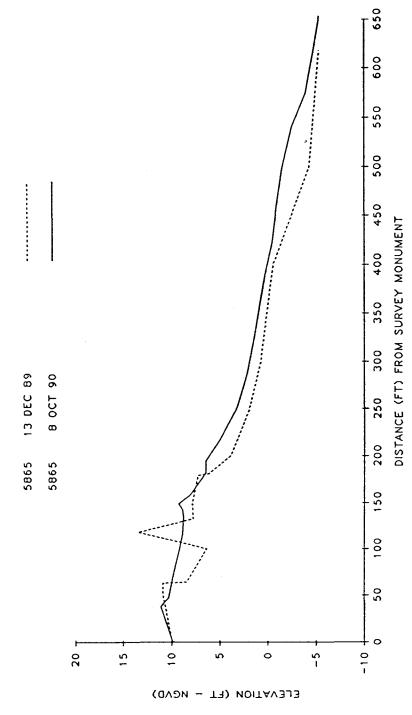
NORTH OF BEACH ACCESS AT 37TH AVE N. AND OCEAN BLVD



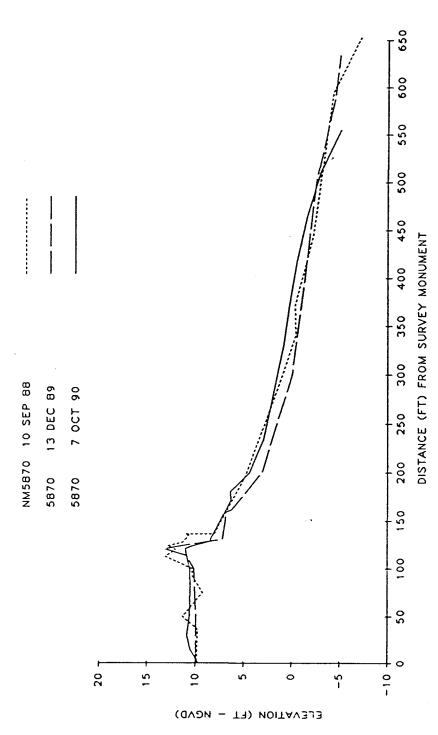
EAST SIDE OF OCEAN BLVD AT SOUTH END OF EMPTY LOT NEAR 42ND AVE S



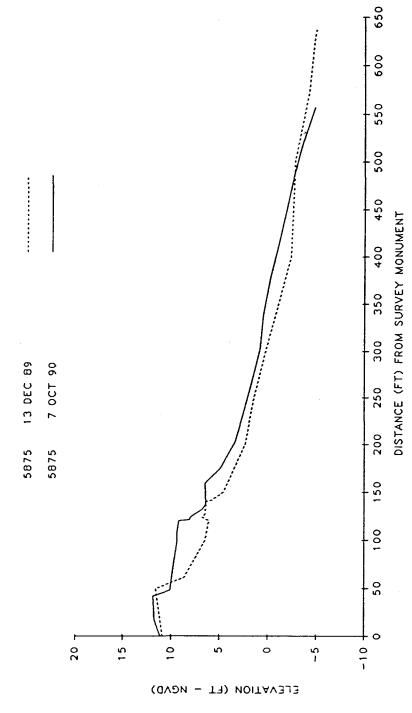
NORTH OF BEACH ACCESS AT 45TH AVE N. AND OCEAN BLVD



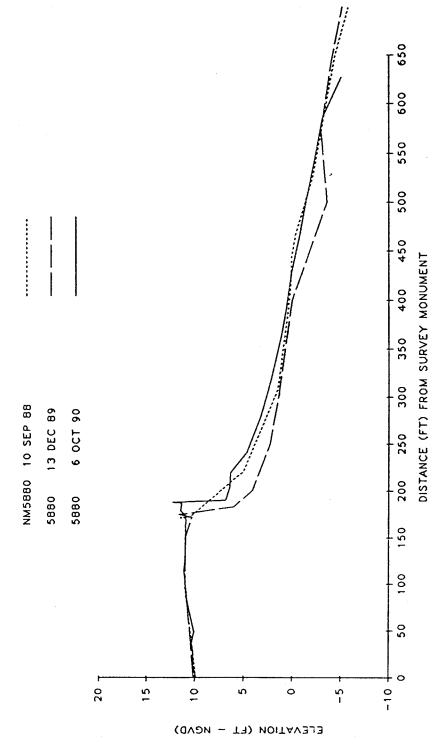
NORTHEAST CORNER OF INTERSECTION OF 48TH AVE N. AND OCEAN BLVD



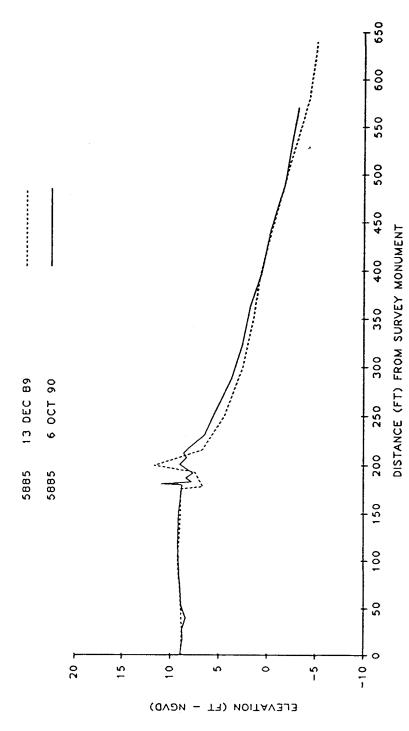
NORTH OF BEACH ACCESS AT 51ST AVE N. AND OCEAN BLVD



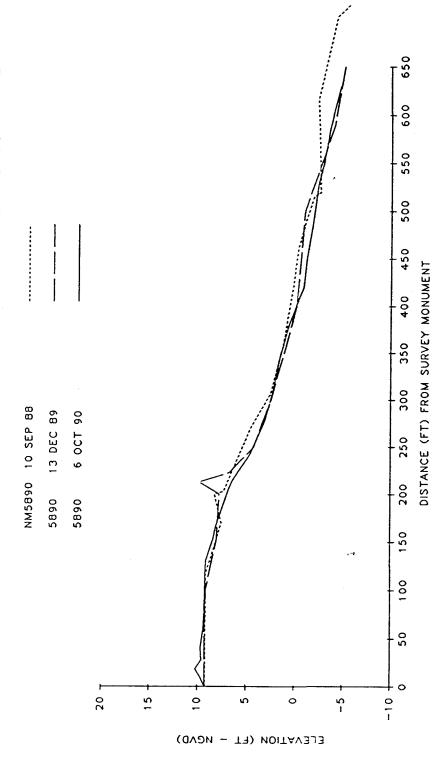
SOUTHWEST CORNER OF INTERSECTION OF 54TH AVE N AND OCEAN BLVD



SOUTHEAST CORNER OF INTERSECTION OF 57TH AVE N. AND OCEAN BLVD



SOUTHEAST CORNER OF INTERSECTION OF OCEAN BLVD AND 59TH AVE N



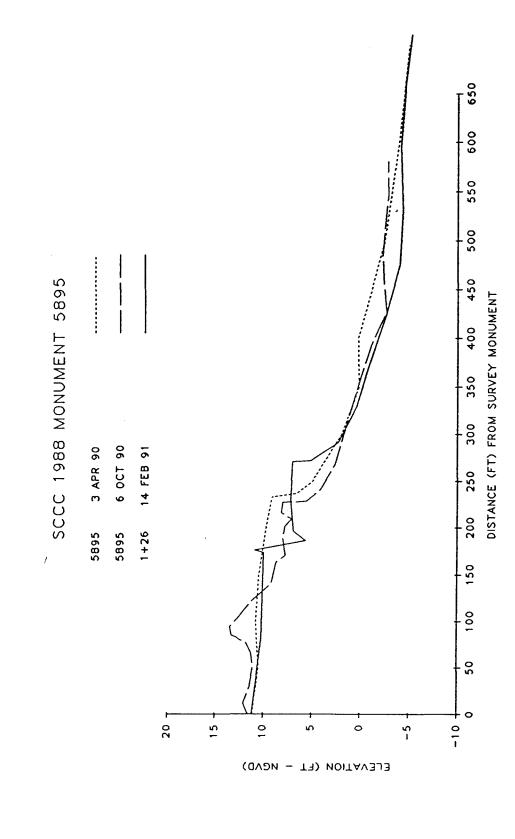
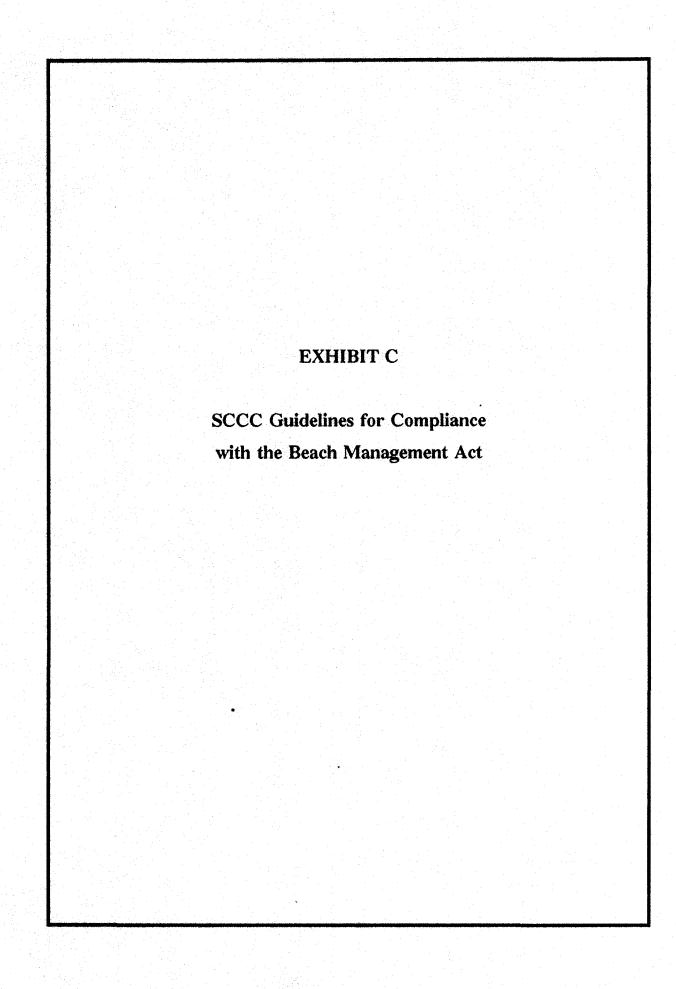


EXHIBIT C

SCCC Guidelines for Complying



Instructions for Complying with the Beach Inventory, Parking and Public Access, and Planning Sections of the Local Comprehensive Beachfront Management Act

1) Beach Structure Inventory.

Using the orthophotography provided by the Council as base map, the local government will prepare an overlay map containing the following information:

Title - Structural Inventory
Name of Community (Beaufort County, Surfside Beach, Edisto Beach)
Sheet Number (corresponding to the sheet number of the orthophoto maps)

Using a tax map number, identify parcel numbers located within 50 feet of the 3 setback lines. Property boundaries do not have to be drawn onto the overlay sheets but can be shown if the local government desires. Each parcel located within 50 feet of the 3 setback lines should be shown on the map by number.

Prepare a tabular inventory of each sheet. The tabular inventory can be shown on a separate included in the text of the plan or located in a box on the overlay sheet itself.

The tabular inventory must contain the following information:

Title - Structural Inventory
Name of Community (Beaufort County, Surfside Beach, Edisto Beach)
Sheet Number (corresponding with the orthophoto map number)
(Title information is not necessary if done in a box on the orthophoto map.)

The tabular inventory should be divided into four columns as shown below:

Parcel # | Structural Inventory | Structural Location | Erosion Control Inventory |

The following codes and classifications should be used to record each structure located within 50 feet of the setback zone:

*Parcel # indicates the parcel identification number from the tax map numbering system.

Structural Inventory Classes

- A) Habitable Structures (less than 5000 square feet in area)
- B) Habitable Structures (greater than 5000 square feet in area)
- C) Recreational Amenities (pools, piers, etc.)
- D) Parking Lots
- E) Ancillary Buildings (gazebos, pool houses, garages, etc.)

Structural Location Classes

- 1. Seaward of Baseline
- 2. Seaward of the Dead Zone
- 3. Seaward of the Setback Line
- 4. Within 50 Feet of Setback Line

Use the following codes:

- 1. On-street Parking
- 2. Off-street Private Parking Lots
- 3. Off-street Public Parking Lots
- 4. Beach Transit Lots (lots where shuttle service to and from the lot is provided by the local government or a contractor)
- C) An estimate of the number of spaces at each site
- D) Distance in feet to the nearest access point (public access point for public parking areas, private access points for private spaces)
- E) Site numbers for all access ways to the beach (1-5, etc.)
- F) Type of access

P.A. = Public Access Points
P.R.P. = Private Access Points

G) Facilities inventory

Using the codes listed below, inventory the facilities available at each access point:

- 1. Walkover Structure
- 2. Restrooms
- 3. Showers
- 4. Lifeguard Stations
- 5. Handicapped Access Ramps
- 6. Vehicle Access Ramps

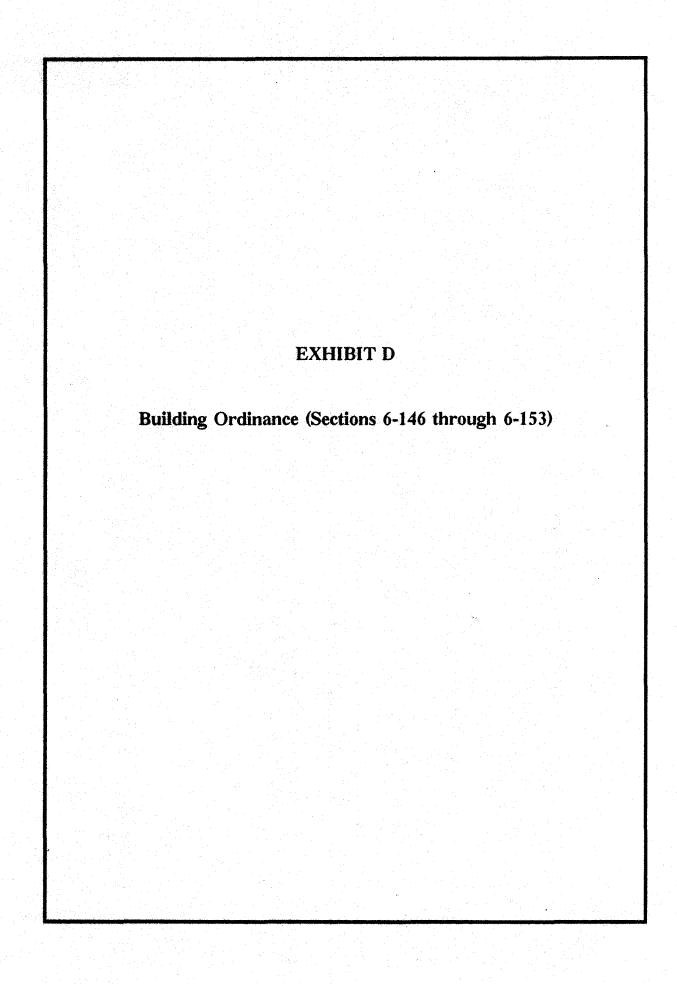
The parking location site identification numbers and site identification letters for all access points should be indicated on the maps. Boundaries for parking areas should also be approximated and drawn on the maps.

A master tabular inventory sheet for the entire community should be included in the text of the plan indicating the total number of walkovers (both private and public), and total number of parking spaces by category and whether or not the spaces are private or public.

Notes:

In determining the number of on-street spaces, measure an area 10' x 20' as being one space.

Estimate distances from parking areas to access points by the route likely to be followed. Do not cross private property boundaries.



ORDINANCE

AN ORDINANCE OF THE CITY OF NORTH MYRTLE BEACH PROVIDING THAT THE CODE OF ORDINANCES OF THE CITY OF NORTH MYRTLE BEACH, SOUTH CAROLINA BE AMENDED BY ADDING SECTIONS 6-146 THROUGH 6-153.

BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF NORTH MYRTLE BEACH, SOUTH CAROLINA, IN COUNCIL DULY ASSEMBLED, THAT:

Sec. 6-146. Unsafe Buildings and Structures.

- (a) All buildings and structures regulated by this code which are structurally unsafe or not provided with adequate egress, or which constitute a fire hazard, or are otherwise dangerous to human life are, for the purposes of this section, unsafe. Any use of buildings or structures constituting a hazard to safety, health or public welfare by reasons of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment are, for the purposes of this section, unsafe uses. All such unsafe buildings, structures, or appendages are hereby declared to be public nuisances and shall be abated by repair, rehabilitation, demolition or removal in accordance with the procedures set forth in this section.
- (b) It shall be unlawful for any owner or agent thereof to keep or maintain any building or structure or part thereof which is an unsafe building as herein defined.

Sec. 6-146.1. Unsafe Building Defined.

As used in this section, "Unsafe Building" means any building or structure which has been determined to be unsafe by the Building Official pursuant to the Southern Building Code.

Sec. 6-146.2. Unsafe Building Declared Public Nuisance.

All such unsafe buildings are hereby determined to be public nuisances and shall be abated by alteration, repair, rehabilitation, demolition or removal in accordance with the procedures specified hereinafter.

Sec. 6-147. Condemnation of Proceedings.

The Building Official shall examine or cause to be examined every building or structure or portion thereof reported as unsafe or damaged and if such is found to be an unsafe building as defined in this chapter, he shall commence proceedings to cause the repair, rehabilitation, demolition or removal of the building.

no person shall enter this building except for the purpose of making repairs required or demolition of the building.

Sec. 6-148. Condemnation of the Building.

If at the expiration of any time limit and the notice provided for in Section 6-147.1, the owner has not complied with the requirements thereof, the Building Official may recommend abatement in accordance with the following provisions.

Sec. 6-148.1. Notice of Public Hearing.

Notwithstanding any other provision of this article when the whole or any part of any building or structure is found to be in a dangerous or unsafe condition, the Building Official, having ascertained that the time for providing a notice has. expired and that the nuisance has not been abated, shall issue a notice to each owner or property party in interest of record whose name the property appears on the last local tax assessment record to appear at a hearing before the Building Board of Adjustments and Appeals and show cause why the building or structure should not be demolished or otherwise made safe. Notice shall be given to the parties in the same manner as provided for in Section 6-147,2 of this code, to appear at the hearing on the date, time and place specified in the notice, which shall not be less than ten (10) days after the mailing of When the whereabouts of such persons is unknown and this notice. cannot be ascertained by the Building Official in the exercise of reasonable diligence, the Building Official shall make an Affidavit to that effect, then the serving of such Complaint upon or Order upon such person shall be made by publishing it once every week for two consecutive weeks in a newspaper of general circulation, printed and published in the County. A copy of such Complaint or Order shall be filed with the Clerk of Court in the County in which the dwelling is located and such filing of the Complaint or Order shall have the same force and effect as other Lis Pendens Notices provided by law.

Sec. 6-149. Hearing.

After receipt of an answer, the Board shall conduct the hearing at the time and location fixed by the complaint and notice.

Sec. 6-149.1. Failure to Appear.

Failure of any person to appear at the hearing set in accordance with the provisions of this chapter shall constitute a waiver of his rights to the administrative hearing on the notice.

Sec. 6-149.5. Decision - Procedures - Board Hearing.

When a case is heard before the Board itself, any member who did not hear the evidence presented or has not read the entire record of the proceedings shall not vote or take part in the decision.

Sec. 6-150. Recourse.

If the owner or occupant is aggrieved by the decision of the Board of Adjustments and Appeals, nothing in this ordinance shall be construed as depriving him of seeking redress in civil or other applicable courts. Said appeal must be filed within thirty (30) days from the effective date of the board's final decision.

Sec. 6-150.2. Implementation.

(a) Failure to Respond.

A person who after the order of the Building Official or the decision of the board becomes final, fails or refuses to respond to the direction of such order, shall be prosecuted to the extent provided for by the law.

(b) Failure to commence work.

Whenever the required repair, vacation or demolition is not commenced within ten (10) days after the effective date of the board's order, the Building Official may cause the building to be repaired to the extent required to render it safe; or if the notice requires demolition, to cause the building or structure to be demolished and all debris be removed from the premises.

(c) The cost of repair or demolition shall constitute a lien on the property and shall be collected in the manner provided by law. Any monies received from the sale of the building or from the demolition thereof, over and above the costs incurred, shall be paid to the owner of record or other persons lawfully entitled thereto.

Sec. 6-151. Interference.

No person shall obstruct or interfere with the implementation of any act required by the final notice of the Building Official or the board. Any person found interfering or obstructing such action shall be prosecuted to the extent provided for by the law.

EXHIBIT E

Zoning Ordinance for W1 and CPO Areas

Minor changes in approved site plans and reports may be made by the planning commission upon findings identical to those required for original approval. Major changes shall be approved subject to further amendatory action only.

(Ord. No. 88-35, 11-1-88; Ord. No. 89-15, § 3, 4-4-89; Ord. No. 90-3, § 4, 2-20-90)

Sec. 23-30. W-1 Waterfront Pleasure District.

- (1) Purpose: The extensive waterfront of North Myrtle Beach constitutes one of its most important assets. The beach should be available for recreation and should be preserved and protected against intrusions of a commercial, residential, and industrial nature. The Waterfront Pleasure District is established for that purpose.
- (2) Boundary: The W-1 District boundary runs from the mean low water mark to the ideal present dunecrest as established by the South Carolina Coastal Council and indicated in Table III [immediately following this section]. Should there be a lawfully existing seawall seaward of the ideal present dunecrest as indicated in Table III, the existing seawall shall serve as the landward boundary line.
 - (3) Permitted uses:
 - (a) Fishing, pleasure and recreational.
 - (b) Swimming.
 - (c) Nature study.
 - (d) Directional markers or official signs.
 - (e) Commercial fishing (must also meet all other relevant city ordinances).
 - (f) Beach franchise activities.
- (4) Special exceptions: Owing to their potential negative impact on the community and surrounding areas, the zoning board of appeals may approve as a special exception fishing piers, provided that uses permitted on such piers are limited to restaurants, bait and tackle shops, and marine accessories. Further provided, such piers are first approved by the South Carolina Coastal Council.

(Ord. No. 88-35, 11-1-88)

Table III

W-1 Landward District Boundary

(For Lots with existing seawalls seaward of the below boundary, the boundary line shall be the existing seawall.)

Street Location Ideal Present Dunecrest,

Linear Feet from Centerline
of Ocean Boulevard

48th Ave. S. 174 47th Ave. S. 167

Supp. No. 23

	Ideal Present Dunecrest.
Street	Linear Feet from Centerline
Location	of Ocean Boulevard
9th Ave. N.	308
10th Ave. N.	306
11th Ave. N.	304
12th Ave. N.	297
13th Ave. N.	289
14th Ave. N.	281
15th Ave. N.	278
16th Ave. N.	275 .
17th Ave. N.	267
18th Ave. N.	261
20th Ave. N.	144 •
21st Ave. N.	138
22nd Ave. N.	132
23rd Ave. N.	127
Sea Mountain Highway	121
24th Ave. N.	116
25th Ave. N.	112
26th Ave. N.	107
27th Ave. N.	102
28th Ave. N.	97
29th Ave. N.	92
30th Ave. N.	87
31st Ave. N.	82
32nd Ave. N.	77
33rd Ave. N.	94
34th Ave. N.	111
37th Ave. N.	134
39th Ave. N.	131
42nd Ave. N.	127
43rd Ave. N.	171
44th Ave. N.	150
45th Ave. N.	145
46th Ave. N.	142
47th Ave. N.	140
48th Ave. N.	138
49th Ave. N.	136
50th Ave. N.	135
51st Ave. N.	133
52nd Ave. N.	129
53rd Ave. N.	126

- 2. Construction of the building is not reasonably possible with front and side yard setback variances.
- The building is located as far landward as practicable, as determined by the zoning board of appeals in consideration of front (and side, if necessary) setback variance.
- 4. No new erosion control devices are constructed, placed, or otherwise made to appear seaward of the building control line.
- (b) Public utilities and other public works provided that the structures must serve an overriding public interest.
- (c) Walkways, dune crossovers, and sand fencing may be built only in accordance with coastal council guidelines.
- (d) Elevated sundecks. patios. walkways, gazebos, stairs, lighting, picnic tables, seating and portable structures.
- (e) Where permitted by primary zoning district, portable bars, suntan sales, etc.
- (f) New armoring devices may only be allowed for structures existing on the effective date of this chapter under guidelines set forth by the South Carolina Coastal Council.
- (5) Nonconforming uses and buildings: Nonconforming uses and buildings shall be regulated by the provisions of Article VIII "Nonconforming Uses." In addition, the following regulations shall apply only to those structures made nonconforming by the application of section 23-31:
 - (a) No new building or addition exceeding twenty-five (25) feet above grade shall be allowed on a lot containing another principal use building within the setback area.
 - (b) In the event that a hurricane, explosion, fire or other disaster shall damage any parking lot so that the repair cost of the parking lot exceeds sixty (60) percent of its replacement cost, reconstruction shall be allowed only if all applicable regulations of the primary zoning district are met.
 - (c) If an existing erosion control device is damaged or destroyed fifty (50) percent or more, it may not be repaired but may be replaced if a permit is obtained from the South Carolina Coastal Council.
 - (d) Nothing in this section is intended to prevent or limit the ability of a property owner to make normal repairs or to perform maintenance necessary to keep nonconforming structures in a safe and sound condition in their present location.
 - (e) If an existing pool is damaged, it may be reconstructed or replaced, provided it is not located further seaward and the surface area is not increased in size.
- (6) Special exceptions: Fishing piers may be approved as special exceptions by the zoning board of appeals, together with any requirements it deems necessary and appropriate to insure that the purposes and objectives of this chapter are promoted, provided such piers are first approved by the South Carolina Coastal Council.

Table IV

Table of Building Control Lines

	Building Control Line (measured in feet from
Street Location	centerline of Ocean Blvd.)
45th	135
44th	129
41st	160
39th	161
37th	162
33rd	147 ,
32nd	142
31st ·	137
30th	135
29th	147
28th	203
27th	194
25th Avenue South	184
21st	145
18th	141
17th	139
16th	131
15th	137
14th	178
13th	170
11th	163
10th	184
9th	178
7th	198
, 6th	203
5th	216
4th	236
3rd	238
2nd	239
1st	249
Main Street	258
1st Avenue North	267
2nd	278
3rd	296
4th	298
5th	296
6th	294

Supp. No. 20

Street Location	Building Control Line (measured in feet from centerline of Ocean Blvd.)		
		51st Avenue North	113
		52nd	109
53rd	106		
54th	103		
55th	120		
56th	137		
57th	154		
58th	185		
59th	217 ,		
60th	. 248		
(Ord. No. 88-35, 11-1-88)			

Secs. 23-32-23-35. Reserved.

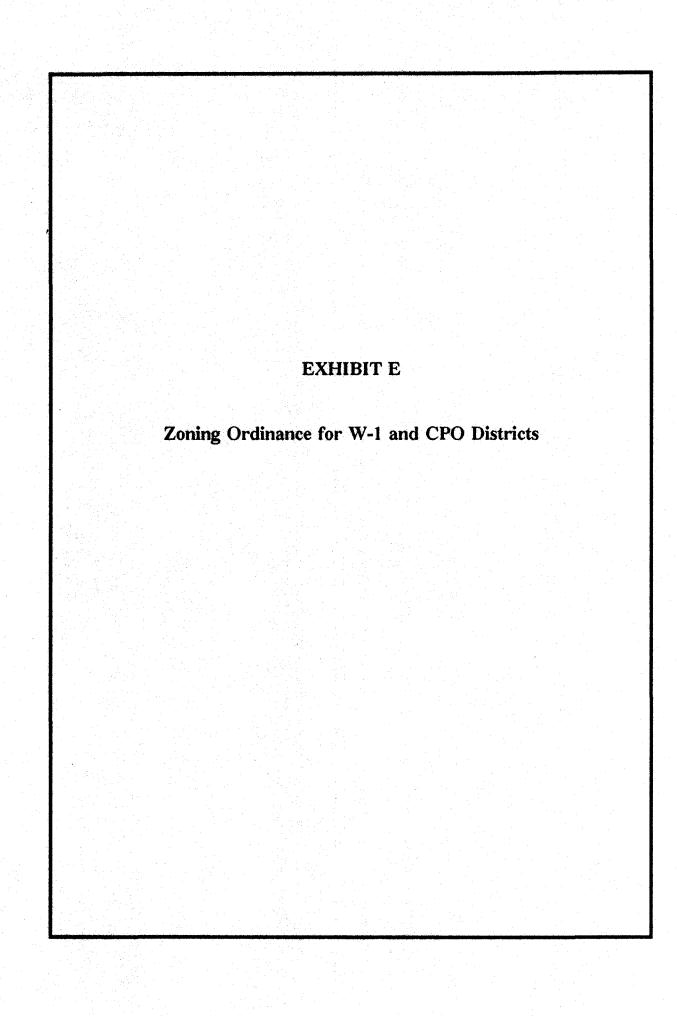
ARTICLE III. SIGN REGULATIONS

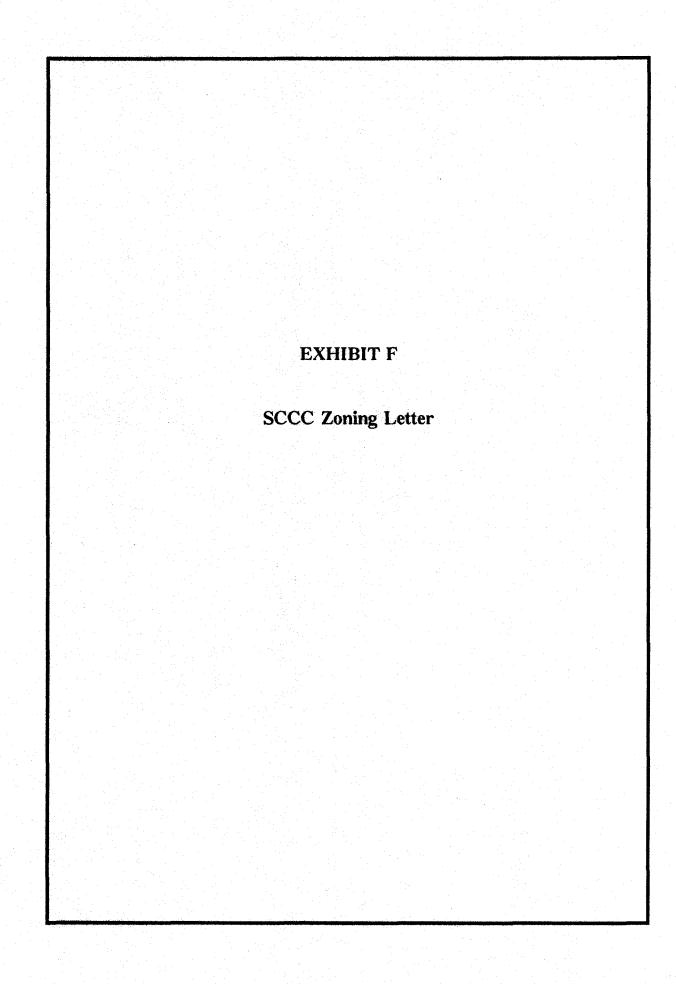
Sec. 23-36. Sign regulations.

- (1) Purpose: The purpose of this section of the North Myrtle Beach Zoning Ordinance is to provide fair and comprehensive regulations that will:
 - (a) Provide a pleasing overall environmental setting and good community appearance
 which is deemed vital to tourism and to the continued economic attractiveness of the
 city;
 - (b) Allow signs appropriate to the planned character of each zoning district;
 - (c) Promote highway safety, the welfare and comfort of travelers, the convenience of the public, and the enjoyment of public travel;
 - (d) Restrict private signs which overload the public's capacity to receive information and increase the probability of accidents by distracting attention or obstructing vision:
 - (e) Protect property values within the City of North Myrtle Beach; and,
 - (f) Reduce conflict among private signs and between private and public information systems.
- (2) Scope of this article: The provisions set forth in this article shall apply and govern in all districts and shall regulate the construction, erection, alteration, use, location, size and height of all signs, regardless of their cost of construction. The provisions of this article shall not apply to:
 - (a) Signs not visible beyond the boundaries of the lot or parcel upon which they are situated or from any public thoroughfare, right-of-way, or beach.

EXHIBIT F

SCCC Zoning Letter







SOUTH CAROLINA COASTAL COUNCIL

Ashley Corporate Center 4280 Executive Place North Suite 300 Charleston, S.C. 29405 (803) 744-5838 Telex (803) 744-5847

John C. Hayes, III Chairman

H. Wayne Beam, Ph.D. Executive Director

October 25, 1988

Mr. Douglas M. Maddock Planning and Development Director The City of North Myrtle Beach 1015 Second Avenue South North Myrtle Beach, SC 29582

Dear Doug:

Thank you for the opportunity to review the City of North Myrtle Beach's proposed zoning legislation affecting beachfront management. Mr. Jack Smith, staff attorney, reviewed the material for compatibility with the Beach Management Bill of 1988 (State Act 634) and found no conflicts of concern.

We look forward to working with you and the City of North Myrtle Beach in further implementation of the Beach Management Act.

Sincerely,

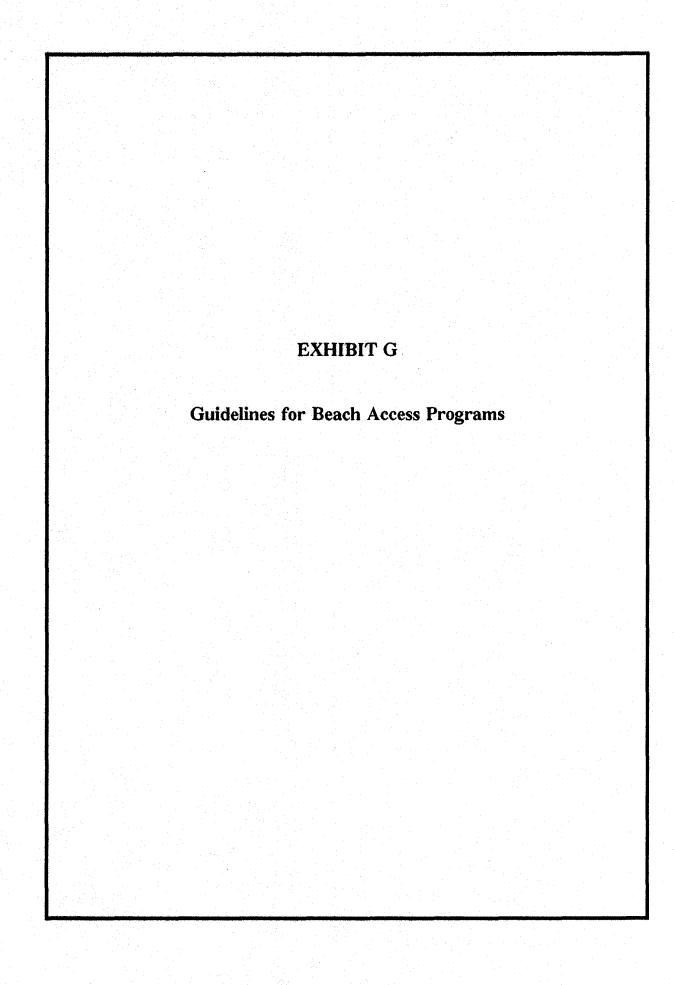
H. Stephen Snyder Director of Planning and Certification

HSS:0365DSB

cc: Dr. H. Wayne Beam

Mr. Christopher L. Brooks

Mr. Jack Smith Mr. Steve Moore



Guidelines for Beach Access Programs

Section 48-39-320 (2)(b) of the Beachfront Management Act requires the Council to develop guidelines for the "development of a beach access program to preserve existing public access and enhance public access to assure full enjoyment of the beach by all residents of the State." Section 48-39-350 (2) of the Act further states that local beachfront management plans must contain "an inventory of public beach access and attendant parking along with a plan for enhancing public access and parking." This plan is to include a "detailed strategy for achieving the goals of preservation of existing public access..." (Section 48-39-350 (10)).

The South Carolina Coastal Zone Management Program provides additional guidance in pursuing the development of a public access plan. The Coastal Zone Management Program states that "public funds can only be expended for beach or shore erosion control in areas, communities, or on barrier islands to which the public has full and complete access" (p. IV-64). This policy is further strengthened in the 1988 Bond Bill which requires communities to provide "reasonable public access" in order to qualify for state funding for beach nourishment.

The Council has determined (Coastal Zone Management Program, p. IV-62) that a stretch of beach is accessible to the public if:

(1) Reasonable provision is made for transportation facilities, including automobile parking, boat landings, bicycle racks and/or public mass transit. Facilities must be available on a year-round basis, and fees, if charged, must be nominal and serve only to offset actual costs.

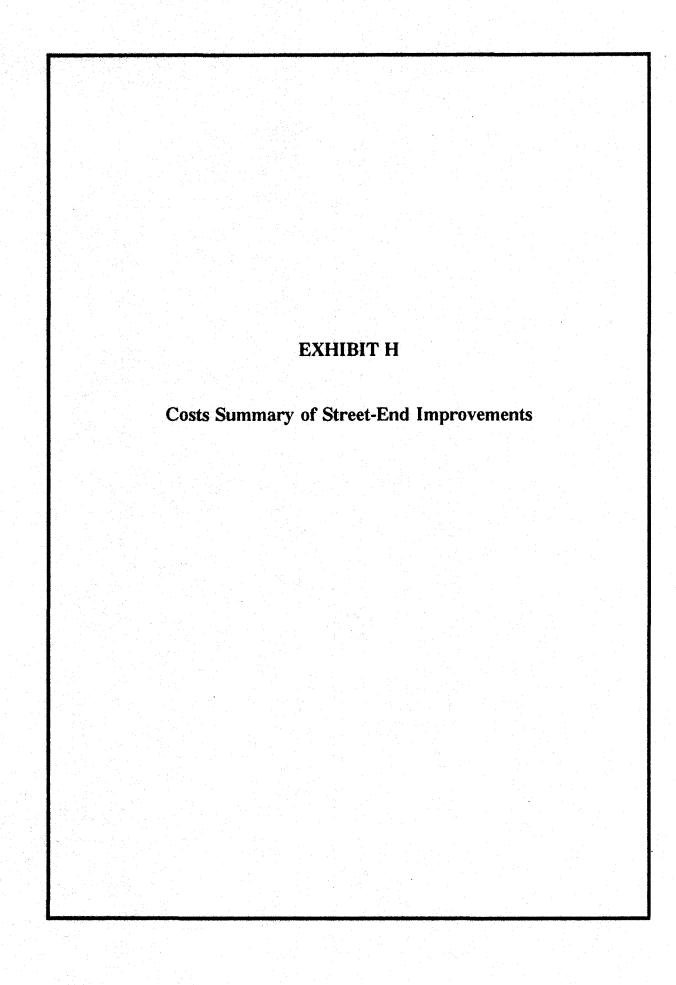
2. In order to be eligible to apply for state funds for erosion control or renourishment or use of other public resources, the local government must demonstrate that: (a) the public has full and complete access to the stretch of beach receiving the benefits, or (b) the local government must demonstrate to the satisfaction of Council the means and commitment to provide such access.

۱₂;

- 3. Each community shall develop a public access plan in accordance with these guidelines and the Guidelines for the Development of Local Beachfront Management Plans.
- 4. Basic criteria for providing full and complete public access is contained in Table 1.
- 5. All access points must possess a clear, legal means for demonstrating undisputed use for public access purposes. Prescriptive easements and unsure land claims will not be considered legal access.
- 6. Each access plan must address the provisions of pubic parking to serve beach access points. All parking must be within 500 feet of the landward most point of access and must be clearly marked. Consideration of parking beyond 500 feet will be made on a case-by-case basis.
- 7. All access points shall be clearly marked with an approved access sign.
- 8. Full and complete public access cannot extend past a physical barrier, i.e., an inlet or seawall, unless a pedestrian walkway or bridge is provided.

Table 1. TYPES OF BEACH PUBLIC ACCESS FACILITIES

Type of Facility	Distance on either side of access points which will be considered as Full and Complete Access	Minimum Facilities
Public Access Point	1/8mle	Trash receptical, walkover/improved surface access, signage, on-street parking for 6 vehicles
Local Public Access Park	1/4 mile	As above, parking for 10 vehicles
Neighborhood Public Access Park	1/2 mile	As above, showers, restrooms, parking for 25 vehicles
Community Public Access Park	3/4 mile	As above, lifeguards, concession, handicapped access and parking, parking for 75 vehicles
Regional Public Access Park	1 mle	As above, parking for 150 vehicles and greater



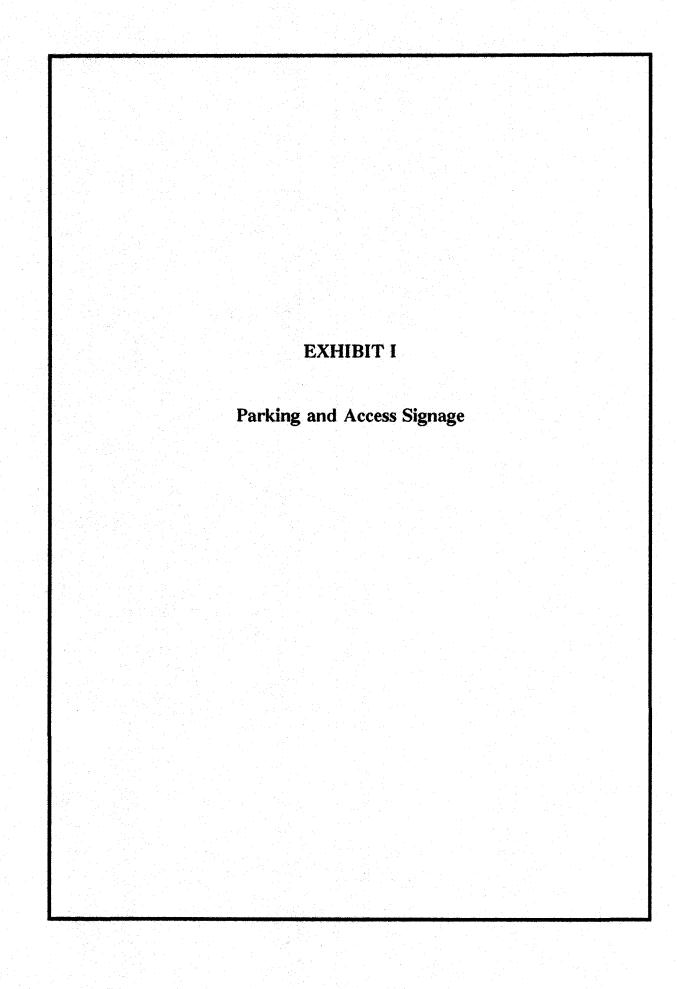
CONSTRUCTION COST ESTIMATE NORTH MYRTLE BEACH STREET ENDS SUMMARY SUMMARY

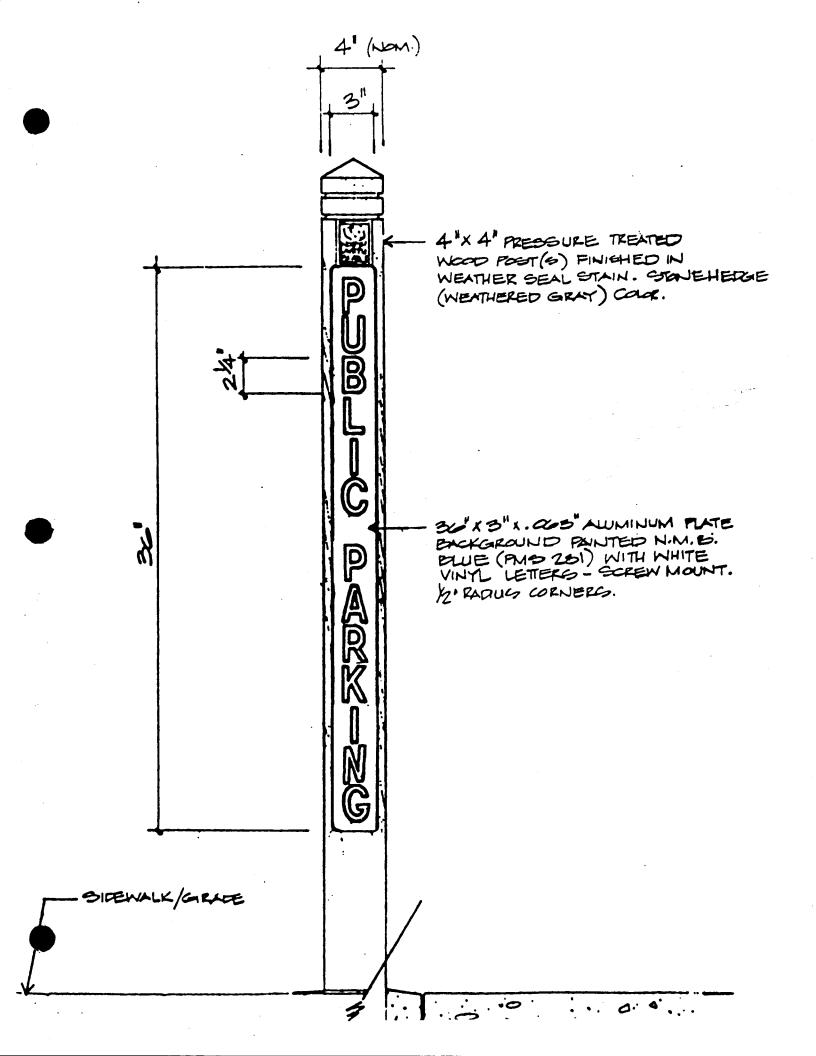
R.R. Boy and Assoc lates FEBRUARY 6, 1990

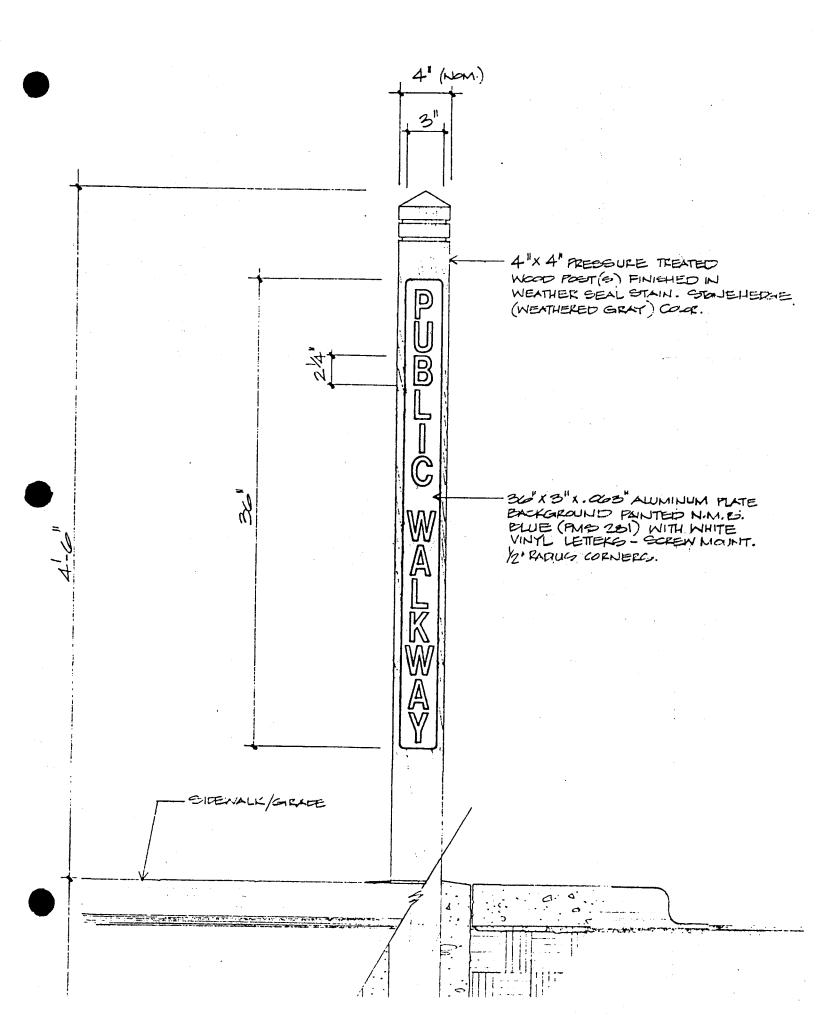
SUMMART				
Item	DESCRIPTION	QTY	Unit Price	Total
47TH AVE SOUTH	L.S.	1	\$7.870.00	\$7.870.00
46TH AVE SOUTH	L.S.	1	\$26.441.50	
39TH AVE SOUTH	L.S.	ī	\$18.920.50	\$18,920.50
	L.S.	i	\$24.997.50	\$24.997.50
27TH AVE SOUTH		1	\$17.951.50	\$17.951.50
25TH AVE SOUTH	L.S.	1	\$26.724.00	\$26.724.00
23RD AVE SOUTH	L.S.	-	•	
21ST AVE SOUTH	L.S.	1	\$20,613.25	\$20,613.25
20TH AVE SOUTH	L.S.	1	\$22,647.00	\$22.647.00
187H AVE SOUTH	L.S.	1	\$13.048.50	\$13.048.50
17TH AVE SOUTH	L.S.	1	\$29,943.50	\$29.943.50
16TH AVE SOUTH	L.S.	. 1	\$13,754.50	
9TH AVE SOUTH	L.S.	1	\$11.964.25	
6TH AVE SOUTH	L.S.	1	\$28,173.75	\$28,173.75
4TH AVE SOUTH	L.S.	1	\$6,473.00	\$6.473.00
3RD AVE SOUTH	L.S.	1	\$27,303.50	\$27.303.50
2ND AVE SOUTH	L.S.	1	\$23,110.75	\$23.110.75
MAIN STREET	L.S.	1	\$110.487.00	\$110.487.00
1ST AVE NORTH	L.S.	1	\$24,951.00	\$24.951.00
	L.S.	1	\$24.810.50	\$24,810.50
3RD AVE NORTH	L.S.	i	\$29,264.50	\$29.264.50
4TH AVE NORTH		i	\$27,621.00	\$27.621.00
5TH AVE NORTH	L.S.	1	\$31,553.50	\$31.553.50
SEA MOUNTAIN HIGHWAY	L.S.	1		\$745.00
50TH AVE NORTH	L.S.		\$745.00	
EXTRAS	L.S.	1	\$17,987.50	\$17.987.50
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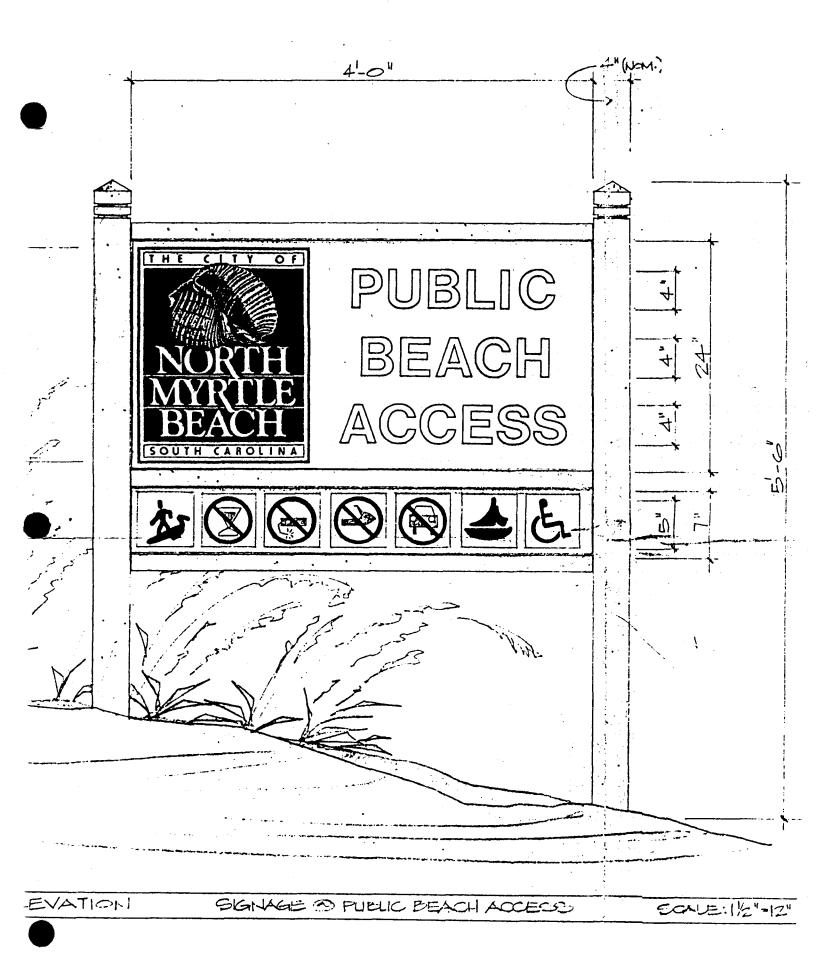
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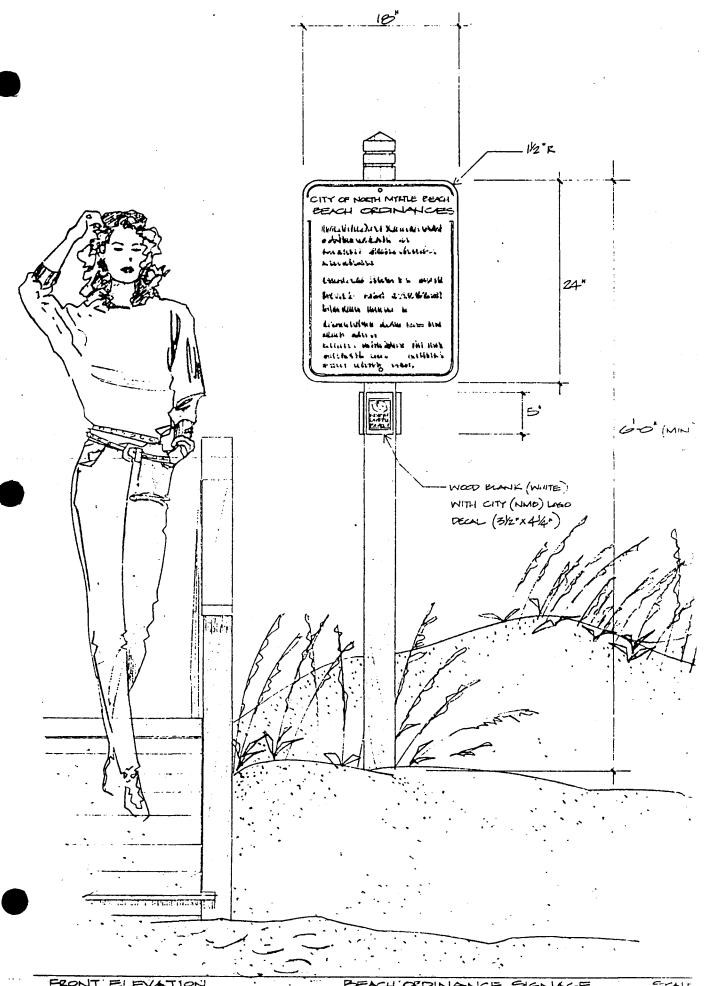
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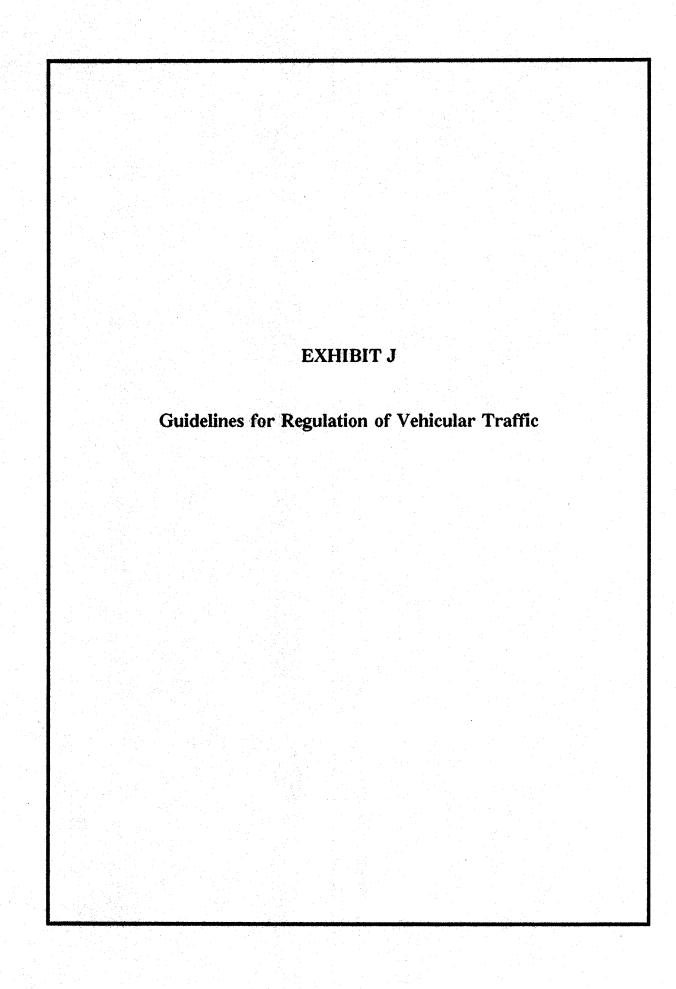








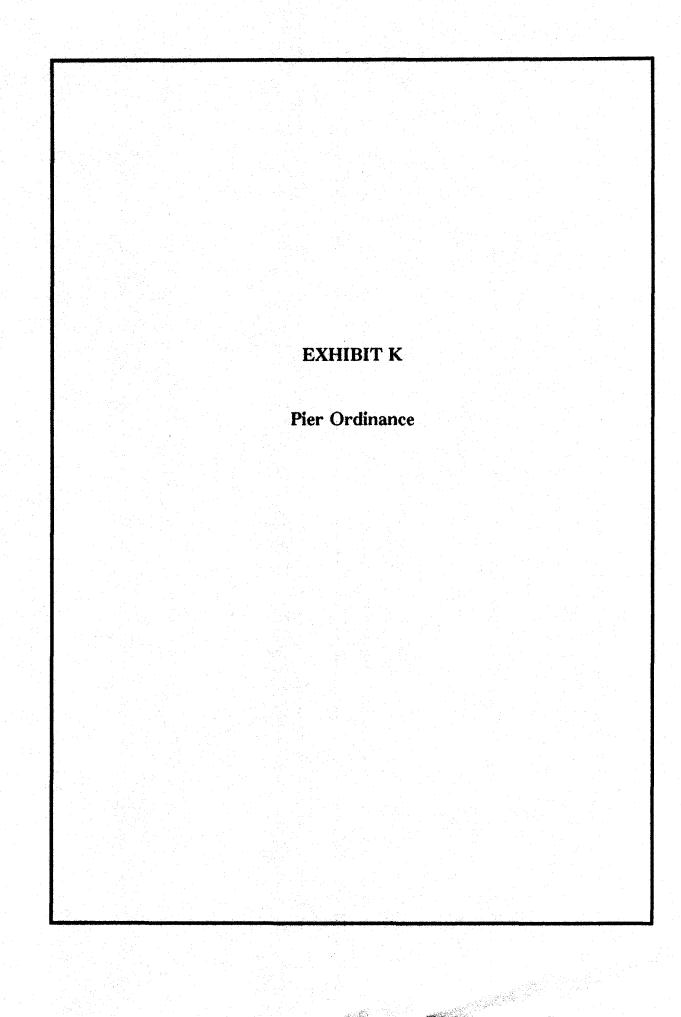




Guidelines for the Regulation of Vehicular Traffic Upon the Beaches and the Beach/Dune System

Section 48-39-320 (2)(f) of the Coastal Zone Management Act, as amended, requires the State to develop guidelines to accomplish the "regulation of vehicular traffic upon the beaches and the beach/dune system which includes the prohibition of vehicles upon public beaches for nonessential uses." The guidelines must be coordinated with appropriate agencies and local governments. The following basic guidelines are established:

- 1. Vehicle shall be defined as any motorized vehicle with wheels or tracks.
- 2. No vehicle will be allowed in the dune system or in any vegetated areas.
- 3. Vehicles are prohibited upon public beaches for non-essential uses. Essential uses shall be defined by the local community.
- 4. Access for essential uses is restricted to authorized access points designated by local government in the local beach access plan.
- 5. No restrictions established herein or by local governments shall prohibit the use of motorized wheelchairs and similar transportation by handicapped individuals.



Sec. 5-11. Operation of boats in manner endangering bathers.

- (a) It shall be unlawful for any person to operate or pilot a boat, including sailboats and catamarans, or to operate jet skis, manipulate skis, sail boards, or similar devices within one hundred (100) yards seaward from the shoreline, or within fifty (50) yards of any swimmer, except for the purpose of launching or beaching such device.
- (b) All rental watercraft, motorized watercraft, including jet skis and/or similar devices will be required to be launched or beached only in specified areas so designated by the city for these purposes. Other nonpowered watercraft that are not used for rental or commercial purposes may be launched or beached in areas outside the designated launch areas for motorized watercraft and rental craft.

(Code 1970, § 6-8; Ord. of 6-17-75; Ord. No. 88-18, 6-21-88)

Sec. 5-12. Operation of boats, etc., in reckless, etc., manner.

No person shall operate any boat, including sailboats and catamarans, or operate jet skis, manipulate skis, sail boards or similar devices in a reckless or negligent manner so as to endanger the life, limb or property of any person.

(Code 1970, § 6-9; Ord. of 6-17-75; Ord. No. 88-18, 6-21-88)

Sec. 5-13. Operation of boats, etc., while intoxicated.

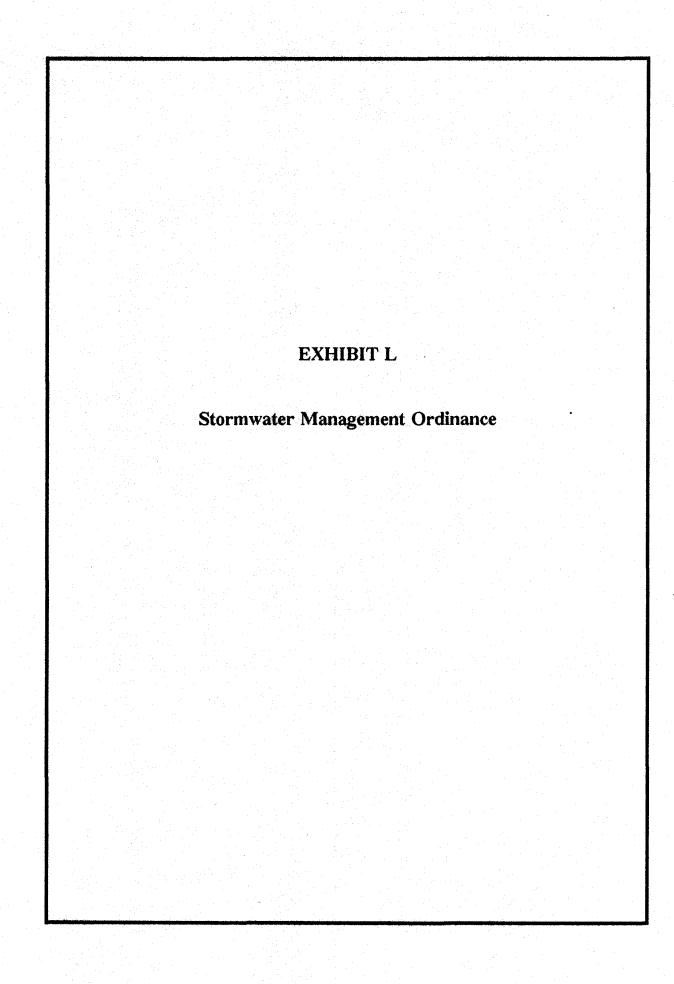
No person shall operate any boat, including sailboats and catamarans, or operate jet skis, manipulate skis, surfboard, sail boards or similar device while intoxicated or under the influence of any narcotic drug, barbiturate, marijuana, intoxicating beverage or other similar substance.

(Code 1970, § 6-10; Ord. of 6-17-75; Ord. No. 88-18, 6-21-88)

Sec. 5-14. Selling or leasing goods-Prohibited, exceptions.

- (a) Upon the public beaches or public waters, no person shall sell, lease or rent any goods, wares or other property except that this provision shall not prohibit the holder of a beach service franchise or license from exercising the rights and privileges granted therein, nor shall it prohibit the city from granting to the holder of a beach service franchise or license the right and privilege of selling or renting upon the public beaches or public waters such items of personal property as are customarily sold or rented by the holders of such franchises or licenses.
- b) Upon the public beaches or public waters, no person shall construct a pier or other amenity, except that this provision shall not prohibit the holder of a pier franchise exercising the rights and privileges granted therein, nor shall it prohibit the city from granting the holder of a pier franchise or license the rights and privileges of conducting such activity from such pier as the provisions of the franchise or license allow.

Ord. of 5-5-81; § 1; Ord. No. 90-7, 4-9-90)



(b) No such violation shall be prosecuted until after issuance of the notice required by the provisions of section 6-116.

(Code 1970, § 7-75; Ord. of 6-21-77)

Secs. 6-118-6-129. Reserved.

ARTICLE V. STORMWATER MANAGEMENT*

Sec. 6-130. Short title.

This article shall be known and cited as "The Stormwater Management Ordinance" of the City of North Myrtle Beach.

(Ord. of 7-2-85, § 1)

Sec. 6-131. Findings of fact.

Situations having potential adverse impacts. The City of North Myrtle Beach finds that inadequately or improperly designed, constructed and/or maintained drainage facilities, and the development of land without due consideration to potential problems associated with stormwater runoff may have significant adverse impacts upon the quality of the waters of the community and that in the absence of adequately and properly designed, constructed, and maintained facilities, the following situations have occurred and may occur again which have potential adverse impacts on the public's health, safety, and welfare:

- (1) Unregulated land use changes may result in increased rates and volumes of stormwater runoff, aggravating or creating local and area flooding harmful to human health, welfare, and safety, a risk to property, and unreasonably interfering with the enjoyment of life or property.
- (2) Development requiring the alteration of natural topography and removal of vegetation may increase the rate and volume of stormwater runoff, thereby increasing soil erosion and sedimentation and degrading water quality.
- (3) The siltation of a drainage facility resulting from increased erosion may significantly decrease the drainage facility's capacity to transport stormwater, thereby increasing the potential for more frequent and aggravated flooding.
- (4) The piecemeal strategies practiced in the absence of stormwater management techniques most often result in increased off-site flooding, erosion, and property damage.

^{*}Editor's note—Sections 1—16 of an ordinance enacted July 2, 1985, have been included herein as Art. V, §§ 6-130—6-145, at the discretion of the editor, inasmuch as said ordinance was not specifically amendatory of the Code.

Cross references—Discharge of stormwater into sanitary sewers prohibited, § 15-130; approval of certain discharges into storm sewers, § 15-131.

(3) Adding, removing, exposing, excavating, leveling, grading, digging, burrowing, dumping, piling, dredging or otherwise significantly disturbing the soil, mud, sand or rock of a site, but shall not include ordinary gardening.

Ditch: A drainage channel in earth created by natural or artificial means to convey surface and/or subsurface water, flowing continuously or intermittently.

Drainage facility: Any component of the drainage system.

Drainage system: The surface and/or subsurface system which collects and conveys storm-water and surface water, and includes all water-courses, water bodies and wetlands.

Elevation: Height in feet above a given known datum, such as mean sea level.

Erosion: The wearing or washing away of soil by the action of water or wind.

Flood: A temporary rise in the level of any water body, watercourse or wetland which results in the inundation of areas not ordinarily covered by water.

Grading: Any displacement of soil by stripping, excavating, stockpiling, or any combination thereof, but does not include gardening.

Impervious surface: A surface which has been compacted or covered with a layer of material so that it is highly resistent to infiltration by water. This term includes, but is not limited to, most conventionally surfaced streets, roofs, sidewalks, driveways, and parking lots.

Owner: The person in whom is vested the fee ownership, dominion, or title of property. This term may also include a tenant, if chargeable under his lease for the maintenance of the property, and any agent of the owner or tenant including a developer.

Person: Any and all persons, natural or artificial and includes any individual, firm, corporation, government agency, business trust, estate, trust, partnership, association, two (2) or more persons having a joint or common interest, or any other legal entity.

Post-development conditions: Those conditions which are expected to exist, or do exist, after alteration, resulting from human activity, of the natural topography, vegetation, and rate, volume or direction of stormwater runoff.

Predevelopment conditions: Those conditions which existed at the time this article becomes effective in terms of the natural topography, vegetation, and rate, volume or direction of stormwater runoff.

Primary drainage system: System that includes the major drainage facilities and appurtenances for conveying stormwater and surface water from watershed areas whose upstream tributary area equals or exceeds forty (40) acres.

Rate: Volume of water passing a point per unit of time, generally expressed in cubic feet per second (cfs).

Receiving bodies of water: Any water bodies, watercourses or wetlands into which surface waters flow either naturally, in manmade ditches, or in a closed conduit system.

Watercourse: Any natural or artificial stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, street, roadway, swale or wash in which water flows in a definite direction, either continuously or intermittently, and which has a definite channel, bed, or banks.

Water body: Any natural or artificial pond, lake, reservoir or other area which ordinarily or intermittently contains water and which has a discernible shoreline.

Watershed: A drainage area or drainage basin contributing to the flow of stormwater into a receiving watercourse or water body.

Wetlands: Those areas where:

- (1) The soil is ordinarily saturated with water; or
- (2) The dominant plant community is one or more of those species designated by the Soil Conservation Service as identifying wetlands or the transitional zone of wetlands.
 (Ord. of 7-2-85, § 4)

Sec. 6-134. Applicability, exemptions, modifications, and appeals.

- (a) Applicability: A stormwater management plan prepared in accordance with this article must be approved by the City of North Myrtle Beach building department before:
 - (1) Recording a subdivision plat, subdividing land, or commencing development for subdivision; or
 - (2) Commencing development for multifamily, institutional, commercial, industrial or other land development projects; or
 - (3) Construction of a new roadway; or
 - (4) Altering, rerouting, deepening, widening, obstructing or changing the characteristics of an existing drainage system or taking action such as filling or grading, that would create adverse impacts on the drainage system; or
 - (5) Commencing any other development activity which may have adverse impacts on any wetland, watercourse, or water body.
- (b) Exemptions: For the purpose of this section, the following activities are exempt from the requirements of this article:
 - (1) Development within a subdivision shall not require approval of a stormwater management plan of each of the following conditions are met:
 - a. Drainage provisions for the subdivision were previously approved and remain valid as part of a final plat; and
 - b. The development is conducted in substantial accordance with the stormwater management provisions contained in the development plan submitted with the final plan approval.

- c. Subdivisions;
- d. Roads;
- e. Impervious surfaces greater than ten thousand (10,000) square feet.
- (d) Appeals: Determinations made by the city building department regarding the enforcement of provisions of this article may be appealed, in writing, to the board of building adjustments within ten (10) days of receipt of notification of action by the city. (Ord. of 7-2-85, § 5)

Sec. 6-135. Application procedures, required submittals, and fees.

- (a) Preapplication conference:
- (1) Purpose. The purpose of the preapplication conference is to discuss concepts, acceptable sources of information, applicable requirements and information known about the subject property prior to submittal of the stormwater management plan permit application in order to identify issues that should be addressed by the applicant. Preapplication conferences are encouraged, not required. Such conferences may be held in conjunction with normally required preapplication conferences.
- (2) Required information. If a preapplication conference is requested by the applicant, the application form shall be submitted to the building department and shall be accompanied by the following information:
 - a. A location map of the property at a scale of 1" equals 400' or greater, with appropriate lot and block number; and
 - b. A sketch of the property at a reasonable scale (1" = 100', or greater) and a statement expressing the intent and scope of the proposed project and the extent of disturbance to the natural and existing drainage system on and around the site.
- (3) Review process. The preapplication form, request for preapplication conference, and the required information shall be reviewed by the building department within ten (10) working days after submission of the completed preapplication [form] for utilization at the preapplication conference.
- (4) Fees. No fee shall be charged for the preapplication review and conference.
- (b) Stormwater Management plan permit application:
- (1) Purpose. The purpose of the stormwater management plan review process is to provide an organized framework for evaluating and acting upon proposals for development as they relate to stormwater management issues.
- (2) Required information. The applicant shall furnish the building department with three (3) copies of the stormwater management plan permit application together with all plans and data required by the "North Myrtle Beach Manual of Design Requirements for Stormwater Management Plans," and sealed by a professional engineer registered in the State of South Carolina.

Review Fee Schedule

Size of project	Fee
½ acre or less	\$ 50.00
½ to 2 acres	100.00
Over 2 acres	200.00

b. Where work for which an approved application is required by this article is commenced prior to obtaining said approval, the building department shall establish, as a penalty, fees twice the standard fee to reflect the additional administrative, inspection, and enforcement efforts required to deal with the violation. The payment of such higher fee shall not relieve any persons from fully complying with the requirements of this article in the execution of the work nor from any other penalties prescribed herein.

Sec. 6-136. Design requirements and contents of stormwater management plans.

- (a) Responsibility of applicant: It is the responsibility of an applicant to include sufficient information in the stormwater management plan to enable evaluation of the potential and predicted impacts of the proposed activity on all affected lands and water, both on- and off-site, and the effectiveness and acceptability of the measures proposed by the applicant for preventing or reducing adverse impacts.
- (b) Required information from the applicant: The information supplied by the applicant shall be in conformance with the provisions of the "North Myrtle Beach Manual of Design Requirements for Stormwater Management Plans" available from the building department. The manual outlines the following requirements:
 - (1) Required information from applicant.
 - (2) Plan contents.
 - (3) Hydraulic design considerations.
 - (4) Computational methodologies.
 - (5) Impact analysis.
 - (6) System design requirements.
- (7) Soil erosion and sediment control plan. (Ord. of 7-2-85, § 7)

Sec. 6-137. Performance standards for stormwater management plans.

Purpose. The purpose of this section is to establish engineering standards for the design, construction, and maintenance activities of stormwater management plans. It is the intent of the article that the performance standards be satisfied by all development proposals, while the design requirements and maintenance responsibilities may be modified by the building department.

Supp. No. 8

Sec. 6-139. Plan adherence.

The applicant shall be required to strictly adhere to the stormwater management plan submitted by the applicant and approved by the building department. Any changes or amendments to the plan must be approved by the building department in accordance with the procedures set forth in this article of obtaining stormwater management plan approval. Enforcement officials shall, and are herein granted, inspection rights and right-of-entry privileges in order to ensure compliance with the requirements of this article.

After completion of the project and prior to issuance of a certificate of occupancy, the building department shall require from the applicant that the professional engineer in charge certify compliance with terms of the approved stormwater management plan and permit. (Ord. of 7-2-85, § 10)

Sec. 6-140. Enforcement.

If the building department determines that the project is not being carried out in accordance with the approved plan, or that any project subject to the article is being carried out without approval, the building department is authorized to take the appropriate enforcement action.

(Ord. of 7-2-85, § 11)

Sec. 6-141. Penalties.

Any person who violates or causes to be violated any provision of this article or permits any such violation or fails to comply with any of the requirements herein shall be guilty of a misdemeanor. Each day upon which such violation occurs shall constitute a separate offense. In addition to any other remedies, whether civil or criminal, the violation of this article may be restrained by injunction, including mandatory injunction, and otherwise abated in any manner provided by law.

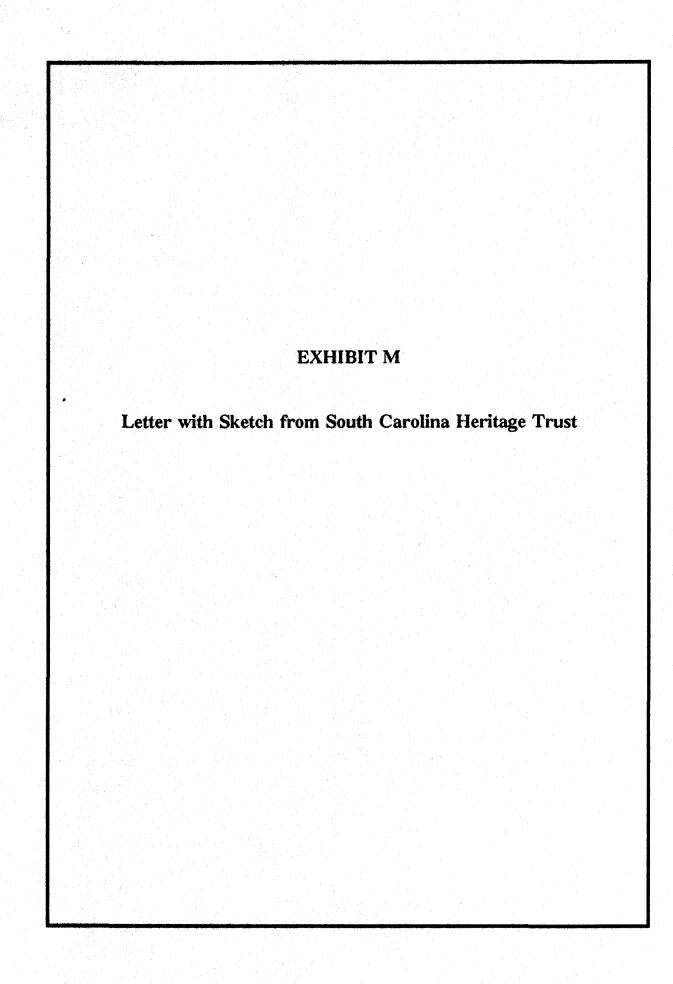
(Ord. of 7-2-85, § 12)

Sec. 6-142. Emergency exemptions.

This article shall not be construed to prevent the performance of any act necessary to prevent material harm to or destruction of real or personal property as a result of a present emergency, including but not limited to fire, hazards resulting from violent storms or hurricanes, or when obtaining a permit is impractical and would cause undue hardship in the protection of the property.

A report of any such emergency action shall be made to the building department by the owner or person in control of the property upon which emergency action was taken as soon as practical, but not more than ten (10) days following such action. Further, the property on which the emergency action is taken shall be brought back to acceptable standards as determined by the building department within thirty (30) calendar days after initiation of such action.

(Ord. of 7-2-85, § 13)





South Carolina Wildlife & Marine Resources Department

James A. Timmerman, Jr., Ph.D.
Executive Director
W. Brock Conrad, Jr.
Director of
Wildlife and Freshwater Fisheries

February 7, 1991

Ms. Alexis Keels Coastal Science & Engineering P.O. Box 8056 Columbia, SC 29202

Re: Rare species review of North Myrtle Beach site

Dear Ms. Keels:

I have reviewed our data on the North Myrtle Beach site (seaward of Intracoastal Waterway, Hog Inlet to White Point Swash), described in our conversation February 7. We have one record within this area, a rare plant <u>Sabatia kennedyana</u>. I have enclosed a sketch to indicate the location.

Please keep in mind that this information is derived from our existing database, and we do not assume that it is complete. Areas not yet inventoried by our biologists may contain important species. Also, our data are always in need of updating because as natural populations change over time, species must be added, dropped, or reclassified.

Thank you for your inquiry. If I can be of further assistance, please call me at 803-734-4032.

Sincerely,

Katherine Boyle Data Manager

S.C. Heritage Trust

Katherine Boyle

STATUS - legal status:

FE - Federal Endangered

FT - Federal Threatened

NC - Of Concern, National (unofficial - plants only)

RC - Of Concern, Regional (unofficial - plants only)

SE - State Endangerd (official state list - animals only)

ST - State Threatened (official state list - animals only)

SC - Of Concern, State (unofficial - animals)

SL - Of Concern, State (unofficial - plants)

SX - State Extirpated

CU - Candidate Undetermined (Federal status review)

UN - Undetermined

TOPOMAP - the USGS topo-map quadrangle in which the element occurred.

DOTNUM - a number given the occurrence to identify it among all occurrences on the topo-map.

LAT and LONG - latitude and longitude.

SOURCE - source of information.

DATE - date of information.

DESC - description of the occurrence and its location.

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